

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

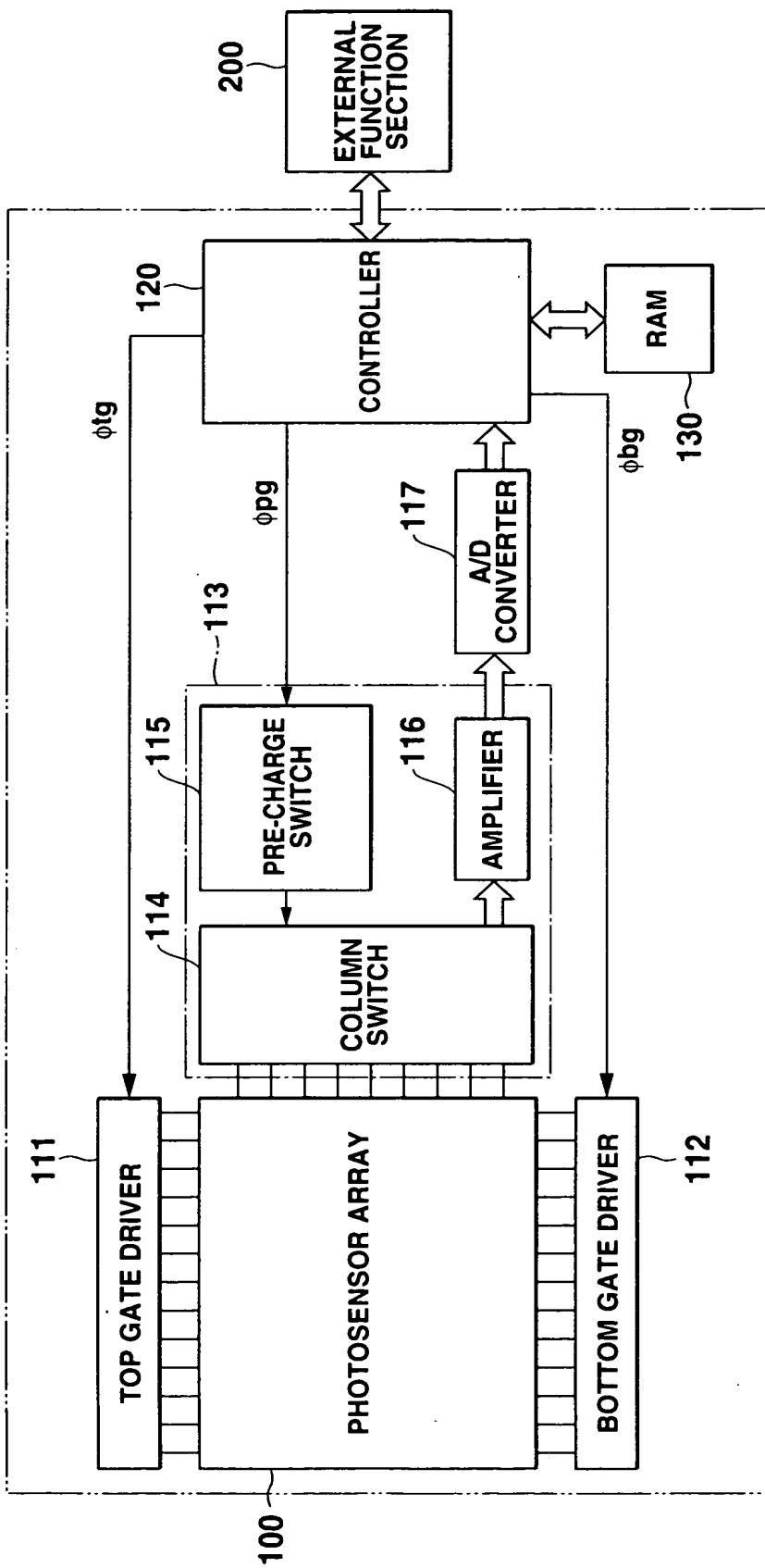


FIG. 1

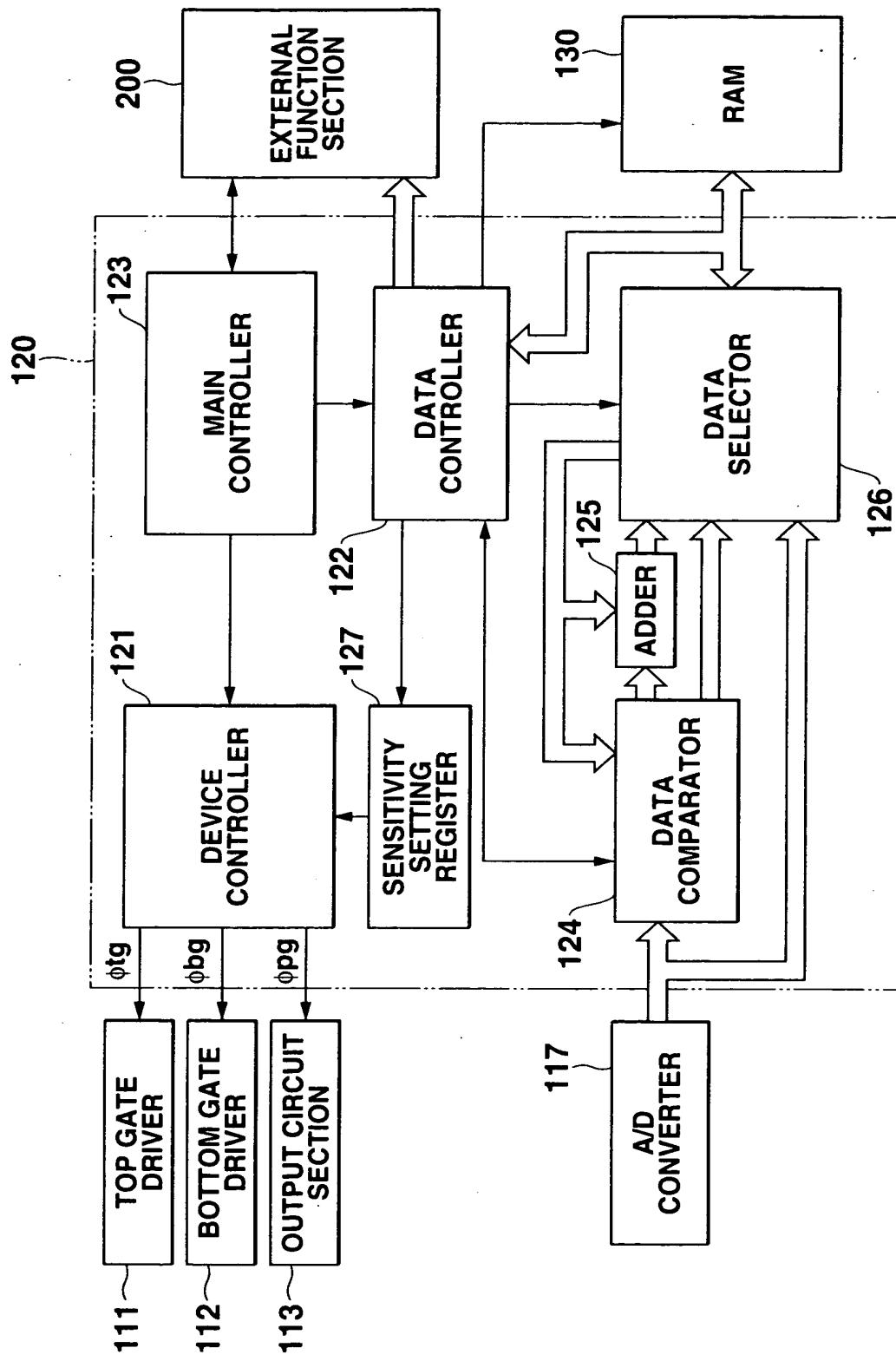


FIG.2

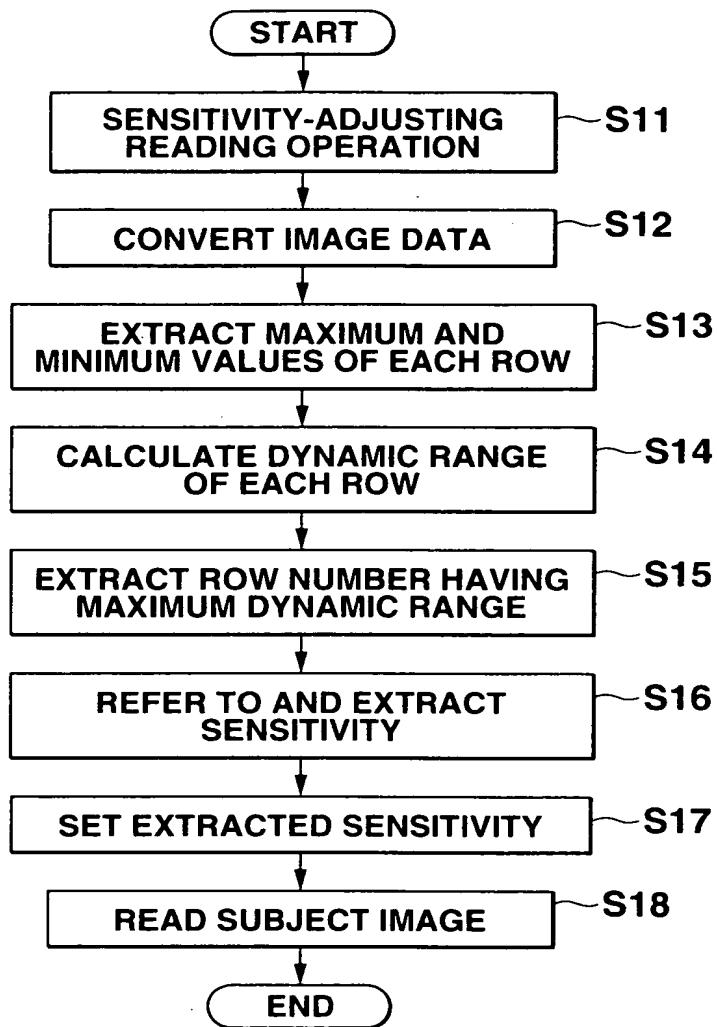


FIG.3

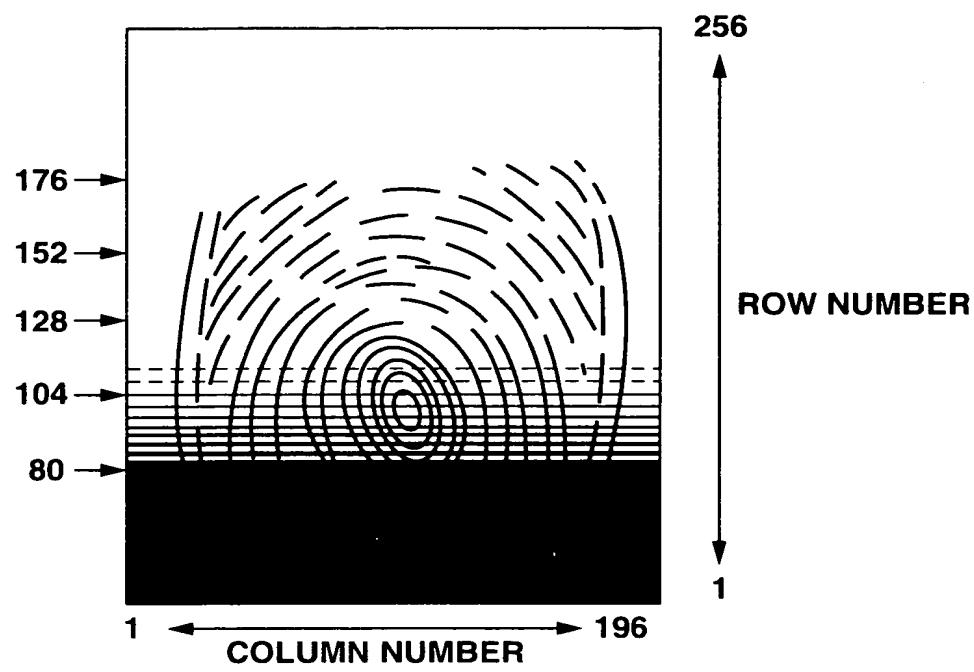


FIG.4

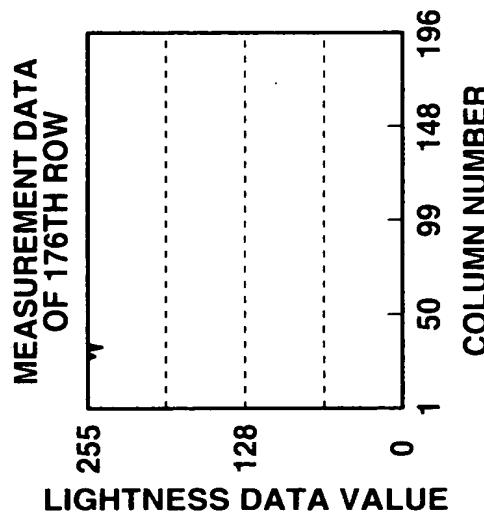


FIG.5A

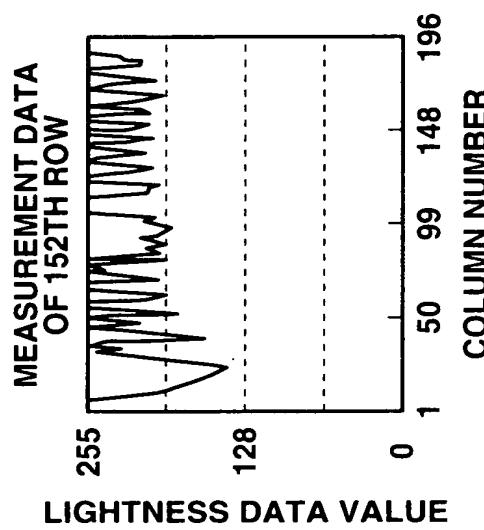


FIG.5B

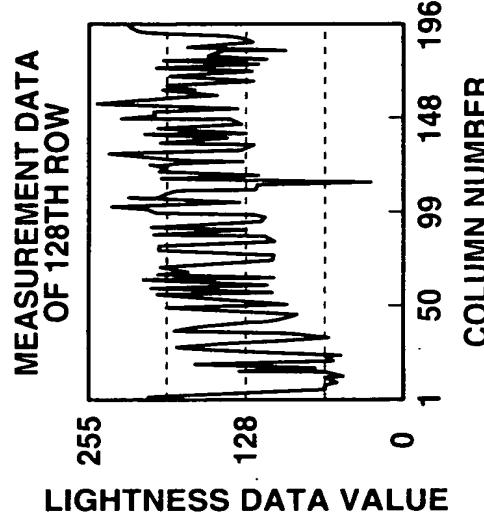


FIG.5C

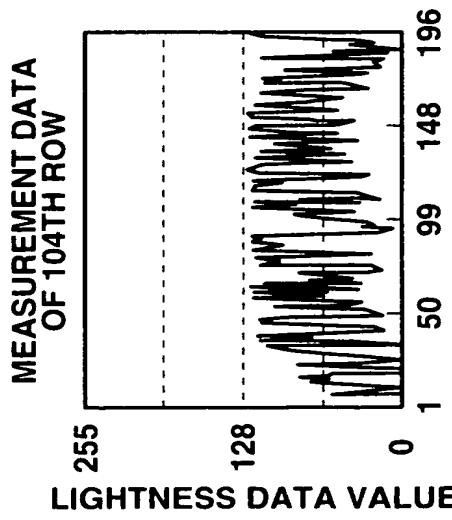


FIG.5D

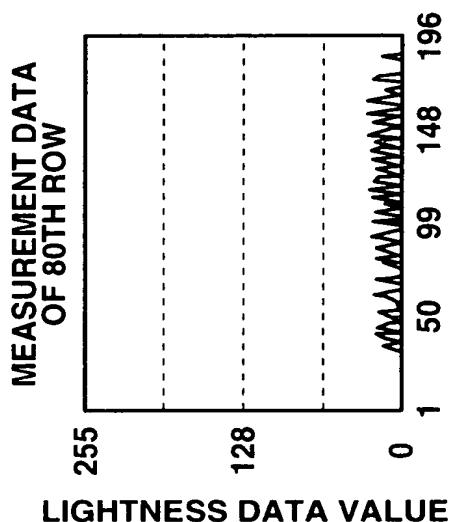


FIG.5E

ROW NUMBER	80TH ROW	104TH ROW	128TH ROW	152ND ROW	176TH ROW
MAXIMUM VALUE	25	127	251	255	255
MINIMUM VALUE	0	0	27	153	249
DYNAMIC RANGE	25	127	224	102	6

FIG.6A

ROW NUMBER	1ST ROW	...	128TH ROW	...	256TH ROW
CHARGE ACCUMULATING PERIOD	T_1	...	T_{128}	...	T_{256}

FIG.6B

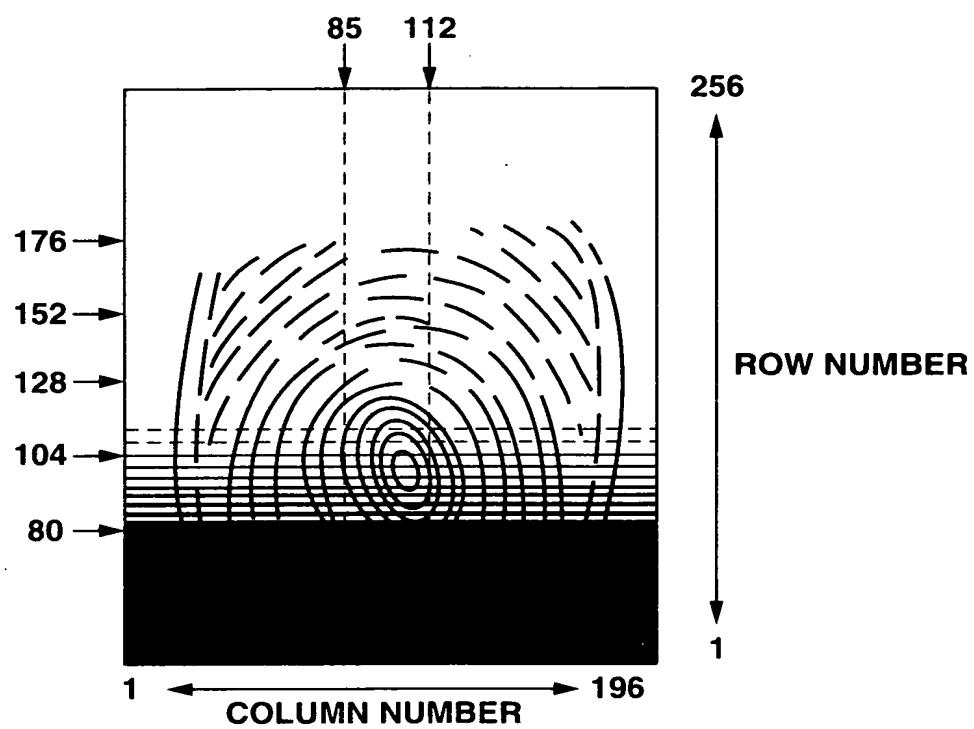


FIG.7

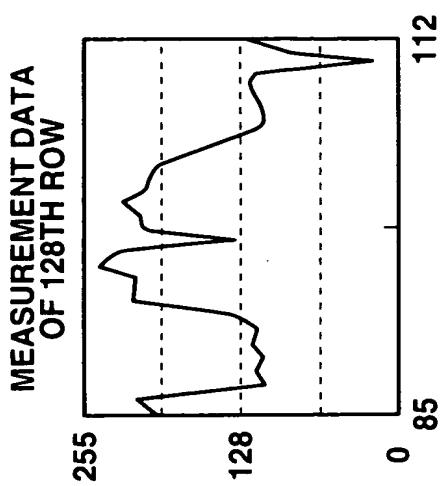


FIG.8C

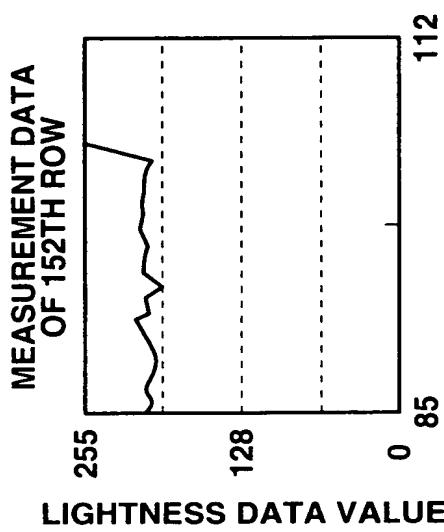


FIG.8B

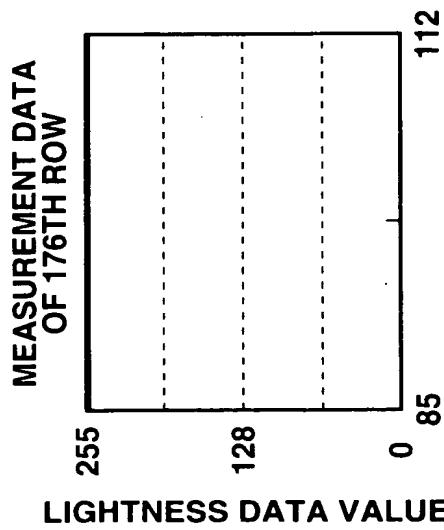


FIG.8A

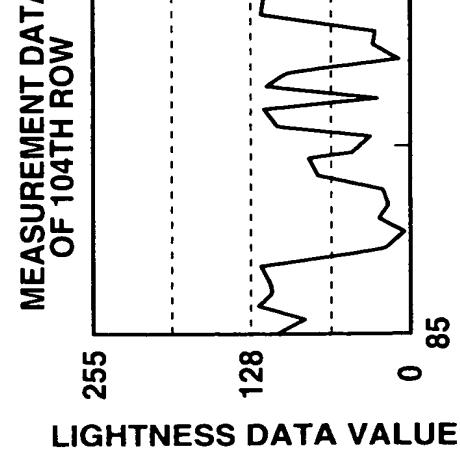
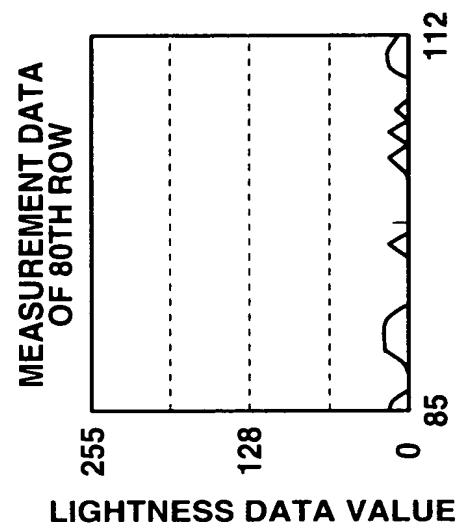


FIG.8D



FIG.8E

ROW NUMBER	80TH ROW	104TH ROW	128TH ROW	152ND ROW	176TH ROW
MAXIMUM VALUE	23	117	243	255	255
MINIMUM VALUE	0	9	27	193	255
DYNAMIC RANGE	23	108	216	62	0

FIG.9A

ROW NUMBER	1ST ROW	...	128TH ROW	...	256TH ROW
CHARGE ACCUMULATING PERIOD	T ₁	...	T ₁₂₈	...	T ₂₅₆

FIG.9B

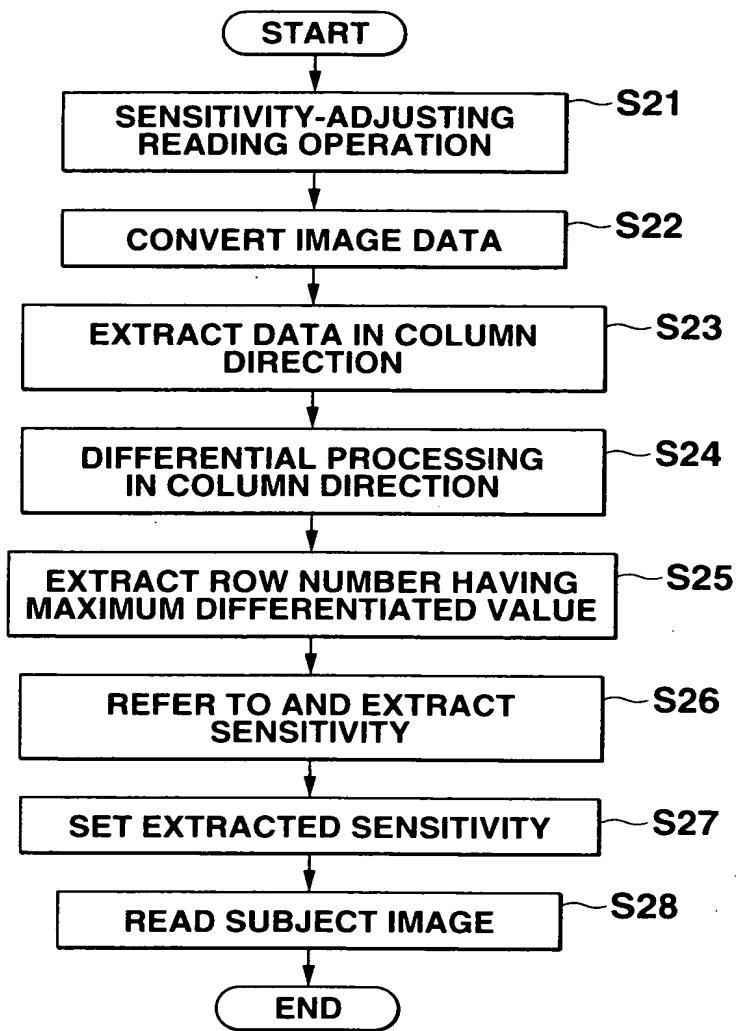


FIG.10

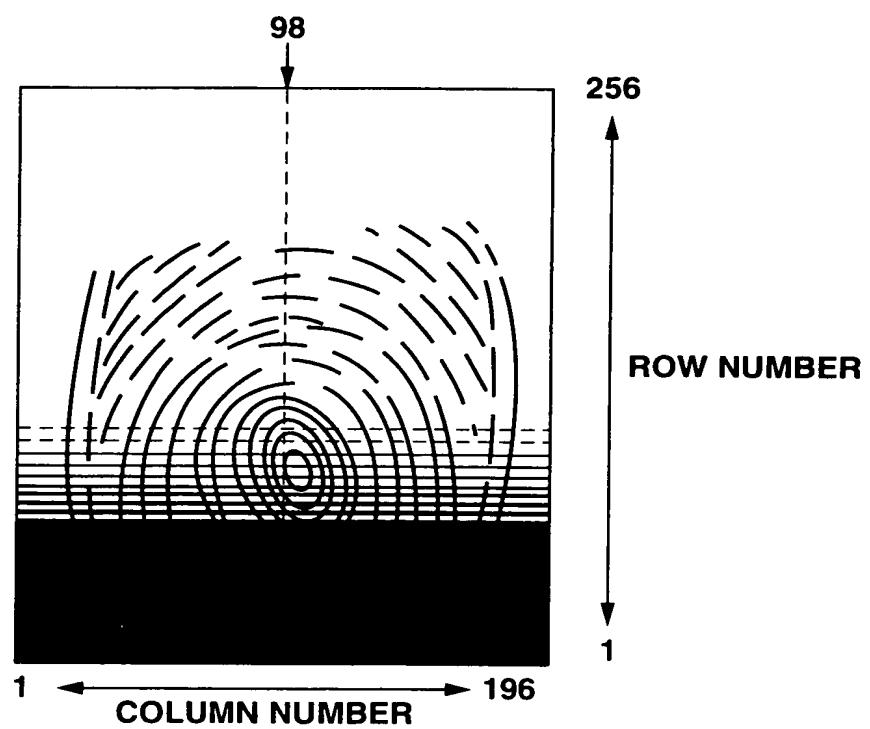


FIG.11

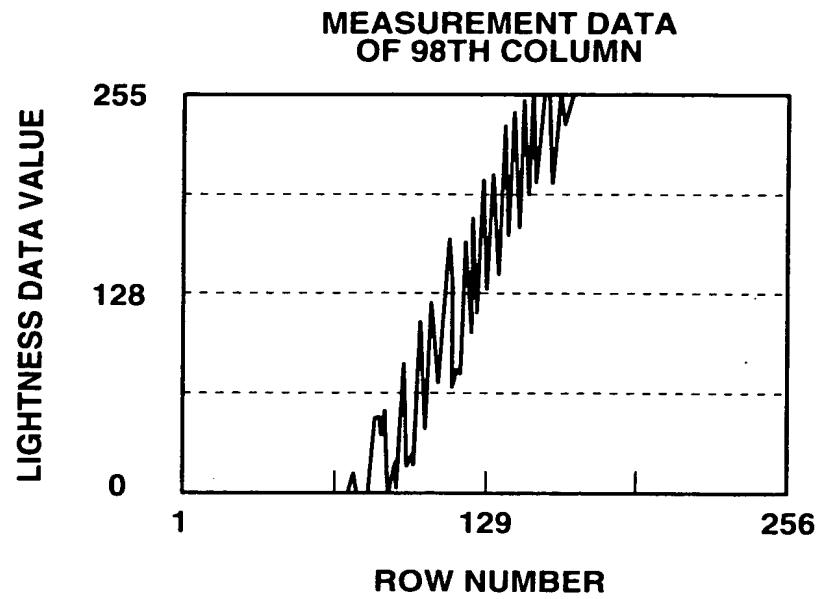


FIG.12A

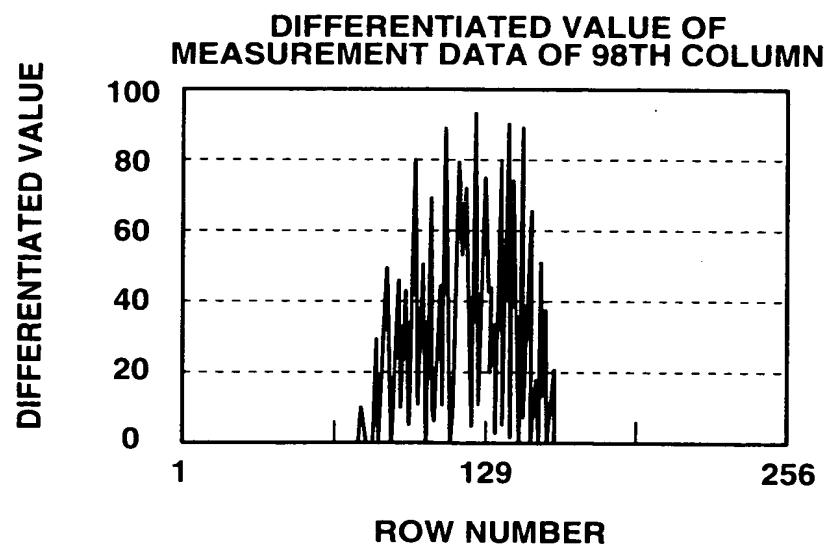


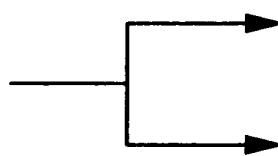
FIG.12B

ROW NUMBER	...	121ST ROW	122ND ROW	123RD ROW	124TH ROW	125TH ROW	126TH ROW	127TH ROW	128TH ROW	129TH ROW	...
DIFFERENTIATED VALUE	...	80	53	72	5	95	11	76	20

FIG. 13A

ROW NUMBER	...	121ST ROW	122ND ROW	123RD ROW	124TH ROW	125TH ROW	126TH ROW	127TH ROW	128TH ROW	129TH ROW	...
CHARGE ACCUMULATING PERIOD	...	T ₁₂₁	T ₁₂₂	T ₁₂₃	T ₁₂₄	T ₁₂₅	T ₁₂₆	T ₁₂₇	T ₁₂₈	T ₁₂₉	...

FIG. 13B



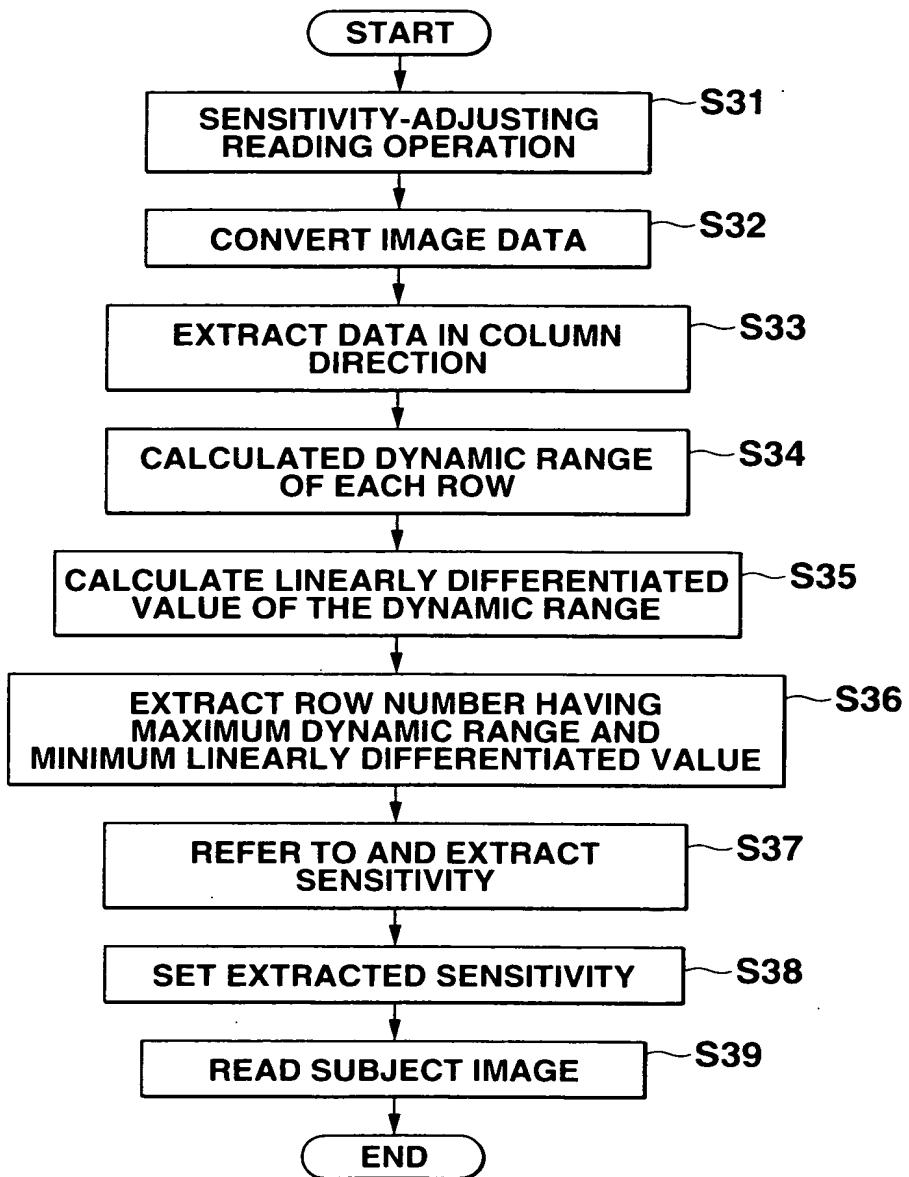


FIG.14

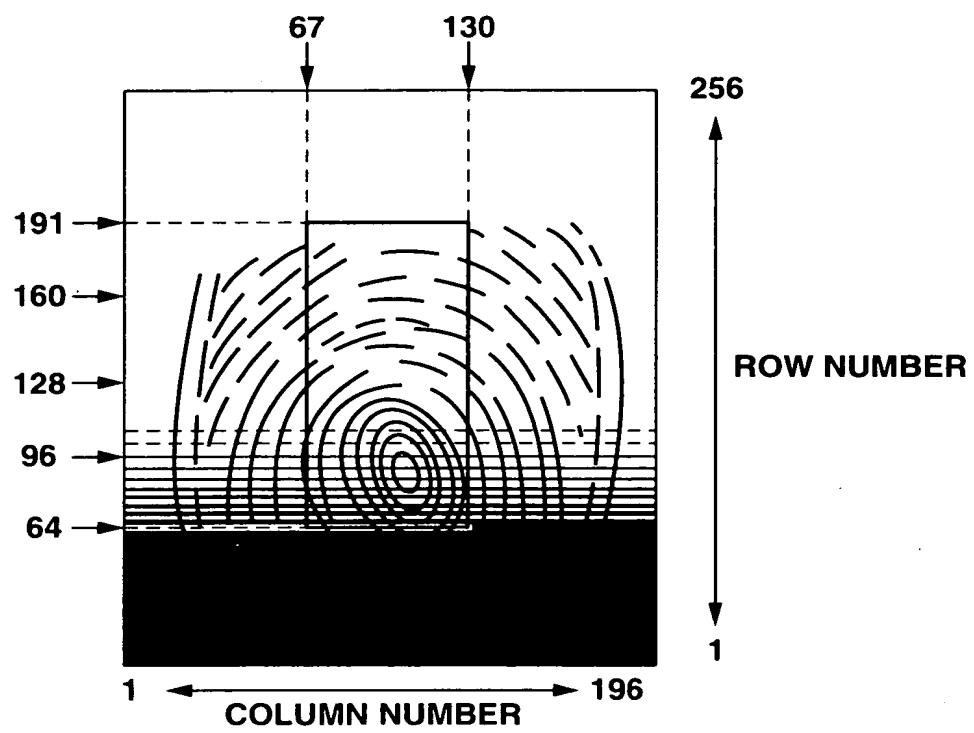


FIG.15

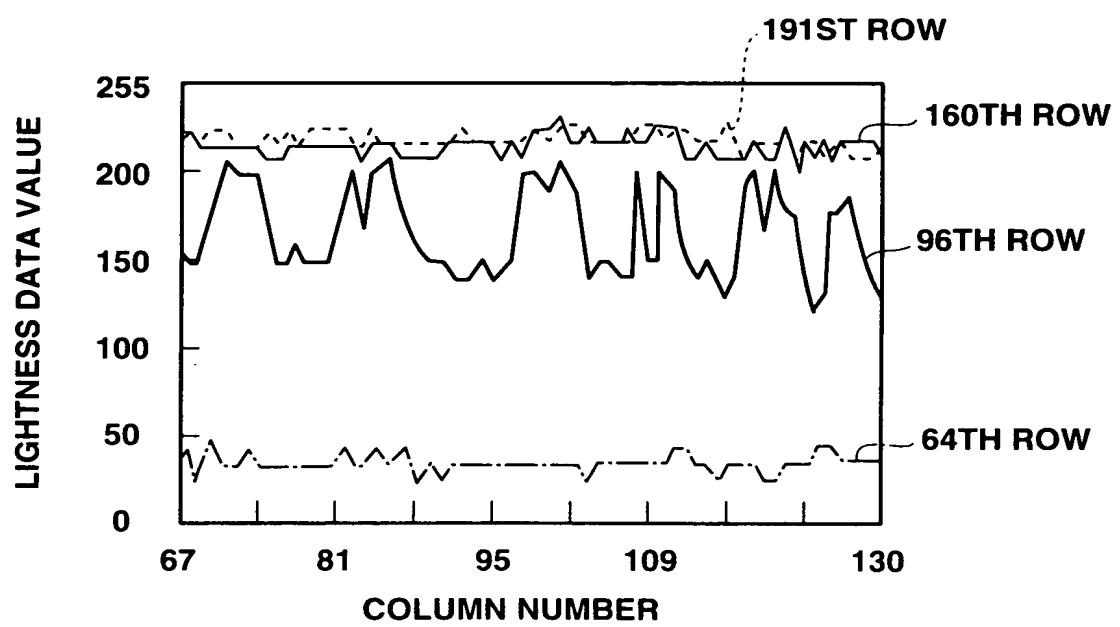


FIG.16

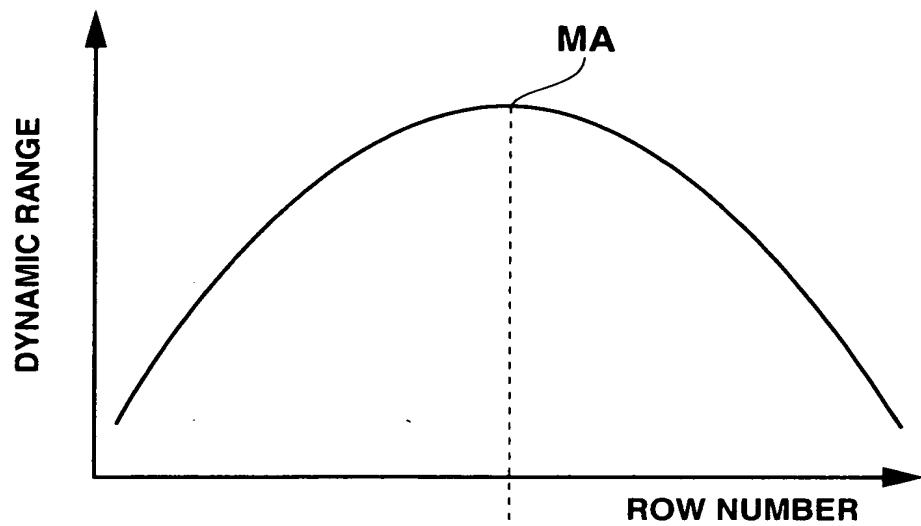


FIG.17A

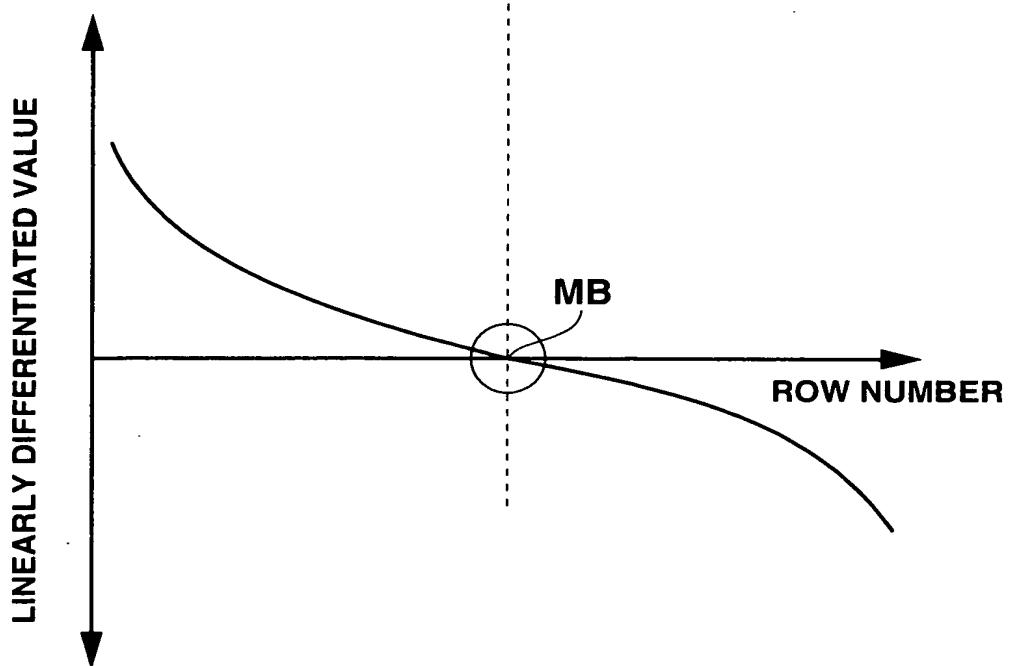


FIG.17B

ROW NUMBER	64TH ROW	...	L_{k-1} ROW	L_k ROW	L_{k+1} ROW	...	191ST ROW
MAXIMUM VALUE	X_{64}	...	X_{k-1}	X_k	X_{k+1}	...	X_{191}
MINIMUM VALUE	Y_{64}	...	Y_{k-1}	Y_k	Y_{k+1}	...	Y_{191}
DYNAMIC RANGE	R_{64}	...	R_{k-1}	$R_{k(MAX)}$	R_{k+1}	...	R_{191}
LINEARLY DIFFERENTIATED VALUE	...		D_{k-2}	$D_{k-1(MIN)}$	D_k	D_{k+1}	...

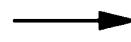
FIG. 18A

ROW NUMBER	64TH ROW	...	L_{k-1} ROW	L_k ROW	L_{k+1} ROW	...	191ST ROW
CHARGE ACCUMULATING PERIOD	T_{64}	...	T_{k-1}	T_k	T_{k+1}	...	T_{191}

FIG. 18B

ROW NUMBER	64TH ROW	...	L_{k-1} ROW	L_k ROW	L_{k+1} ROW	...	191ST ROW
MAXIMUM VALUE	X_{64}	...	X_{k-1}	X_k	X_{k+1}	...	X_{191}
MINIMUM VALUE	Y_{64}	...	Y_{k-1}	Y_k	Y_{k+1}	...	Y_{191}
DYNAMIC RANGE	R_{64}	...	R_{k-1}	$R_k(\text{MAX})$	R_{k+1}	...	R_{191}

FIG.19A



ROW NUMBER	64TH ROW	...	L_{k-1} ROW	L_k ROW	L_{k+1} ROW	...	191ST ROW
CHARGE ACCUMULATING PERIOD	T_{64}	...	T_{k-1}	T_k	T_{k+1}	...	T_{191}

FIG.19B

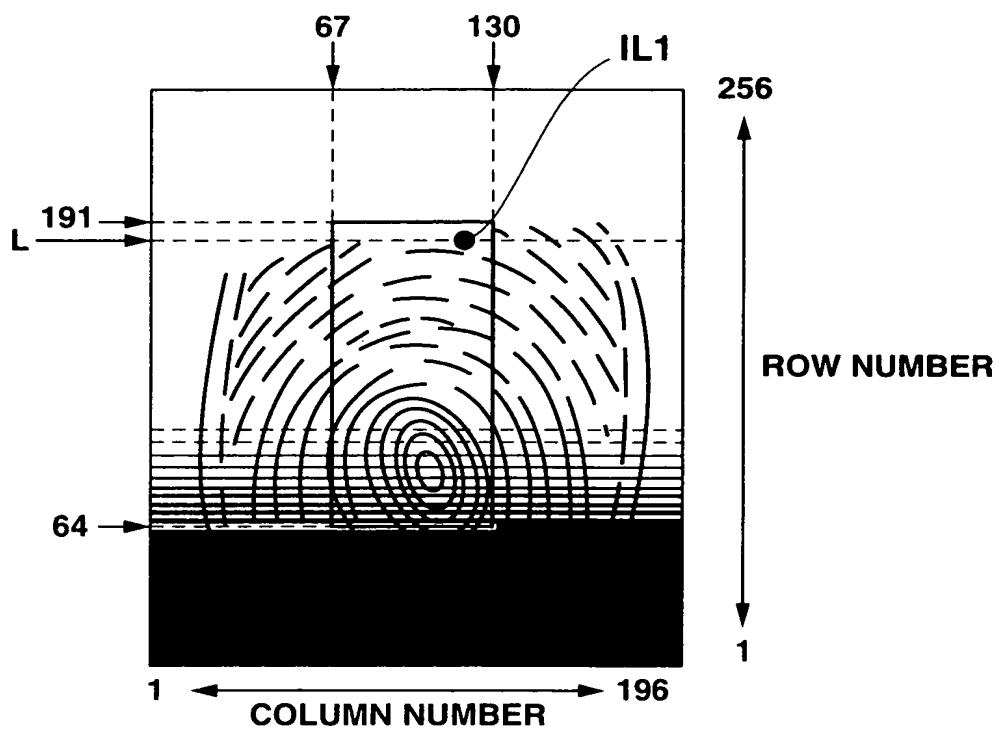


FIG.20

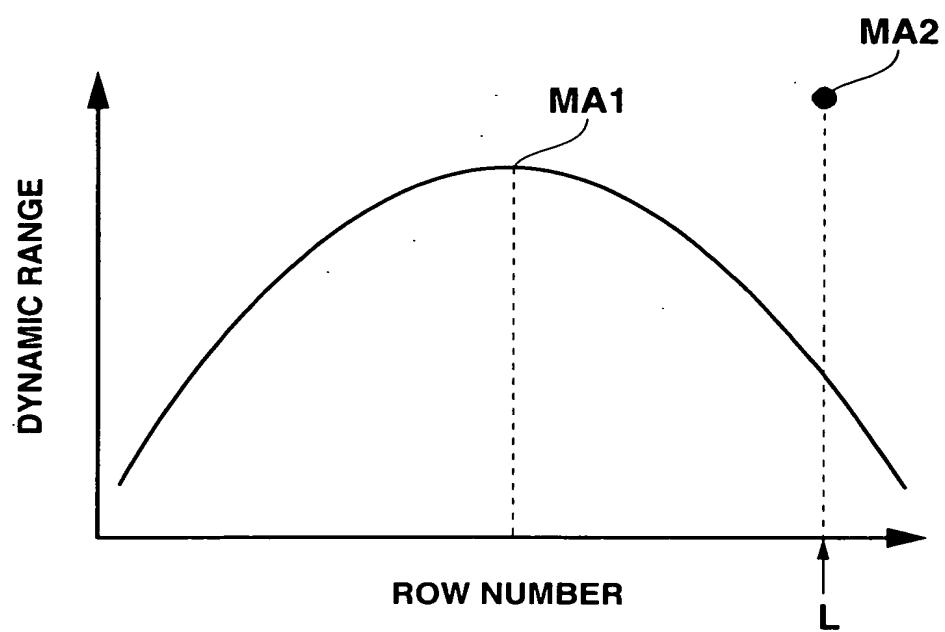


FIG.21

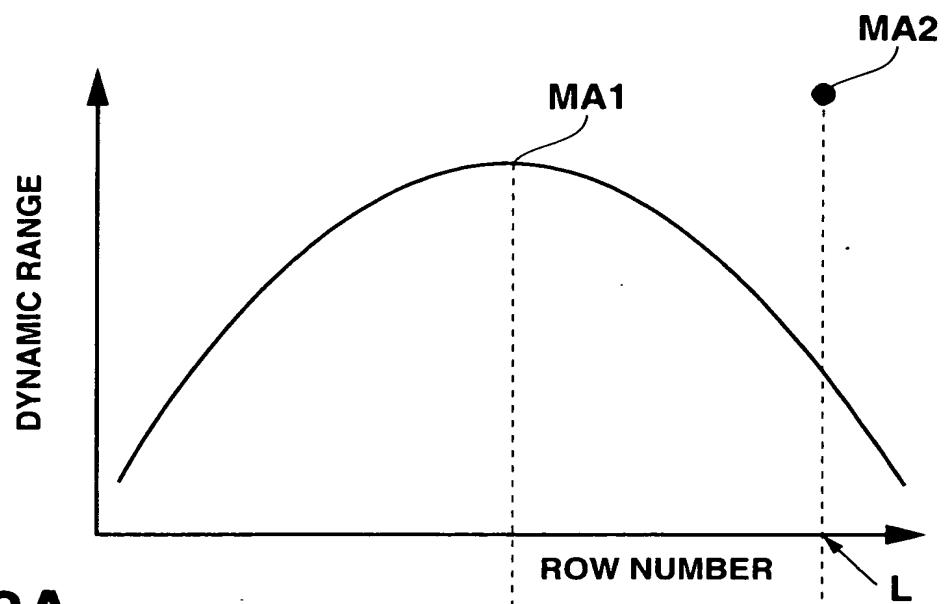


FIG.22A

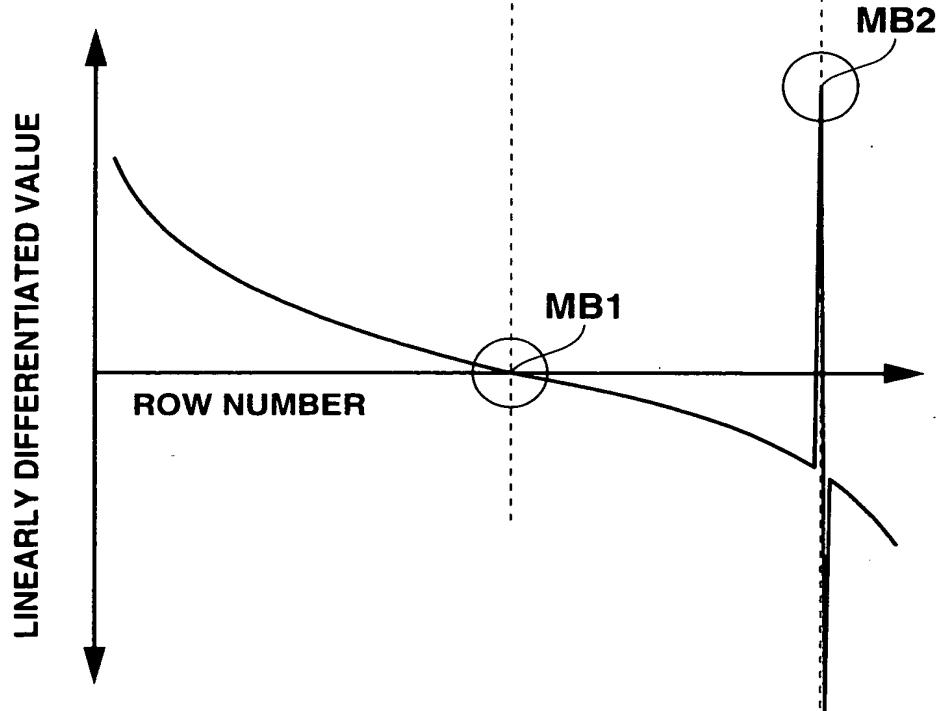


FIG.22B

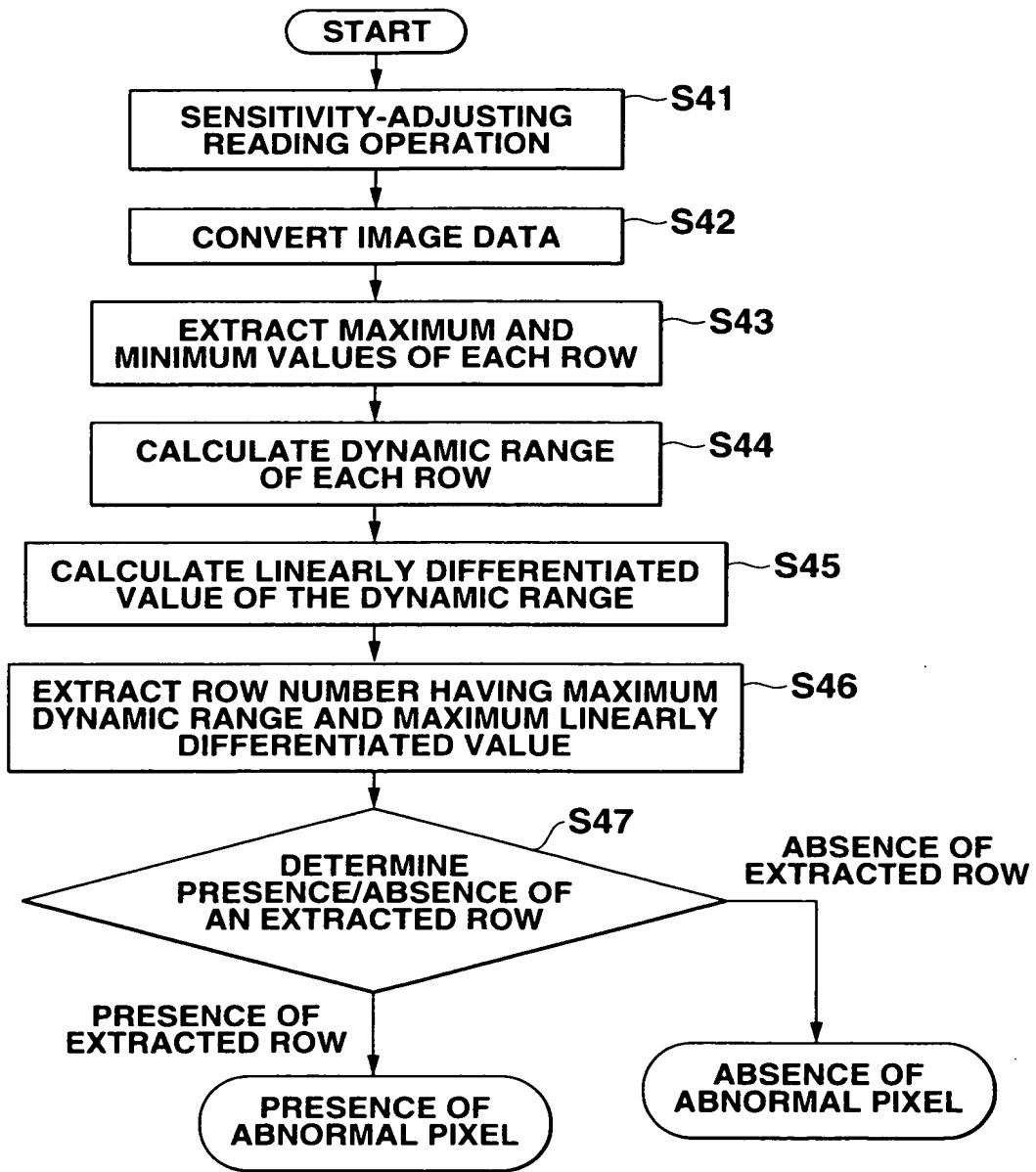


FIG.23

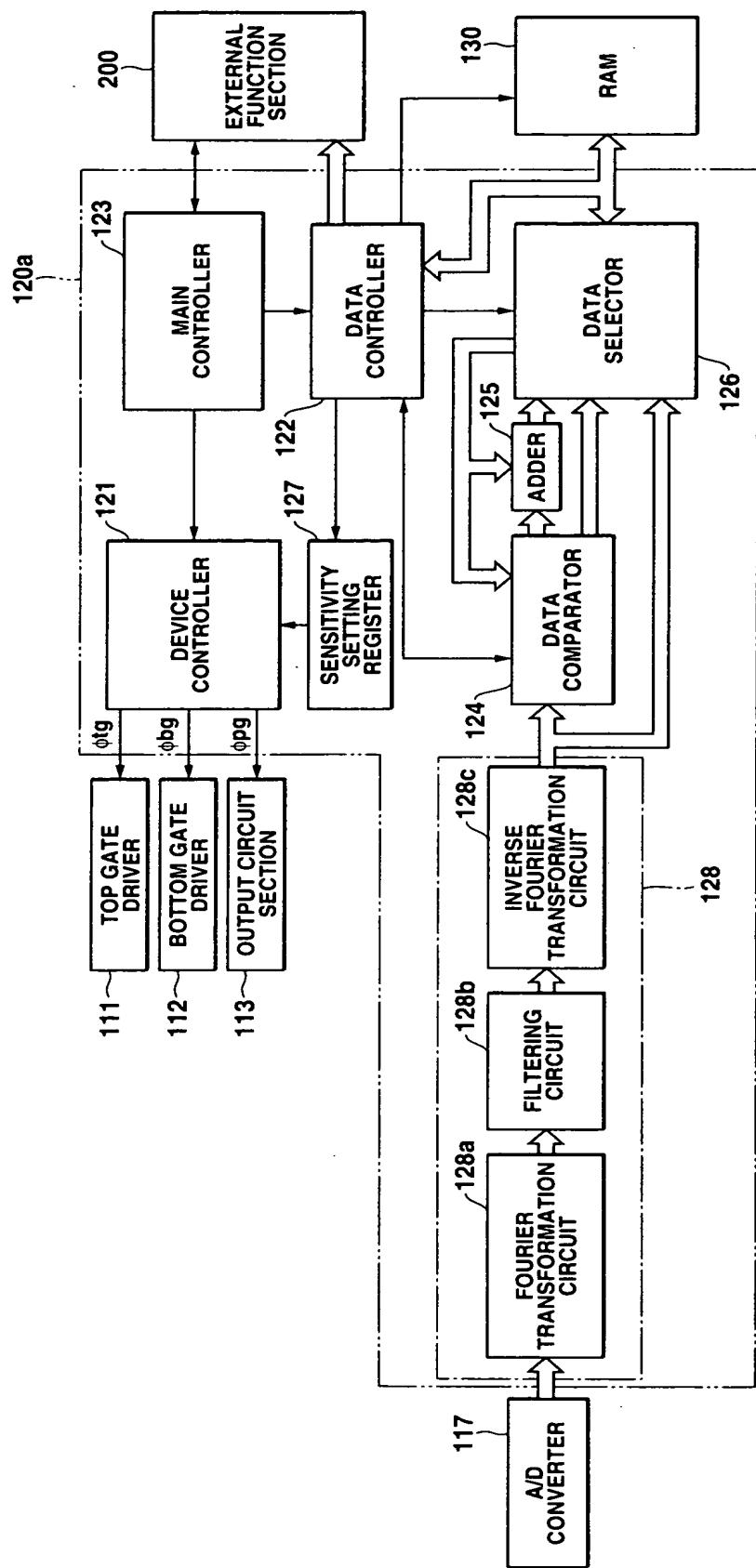


FIG.24

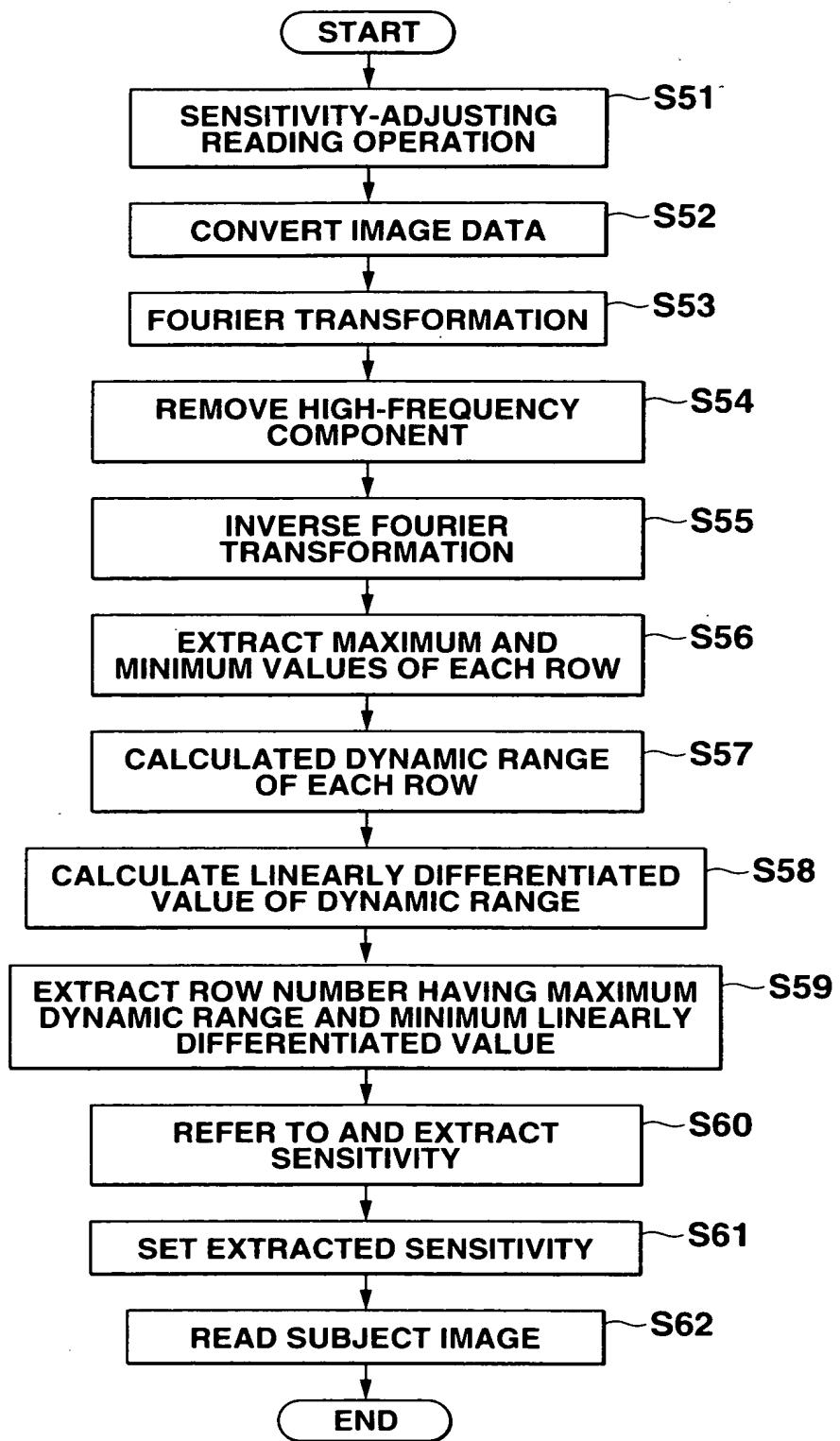


FIG.25

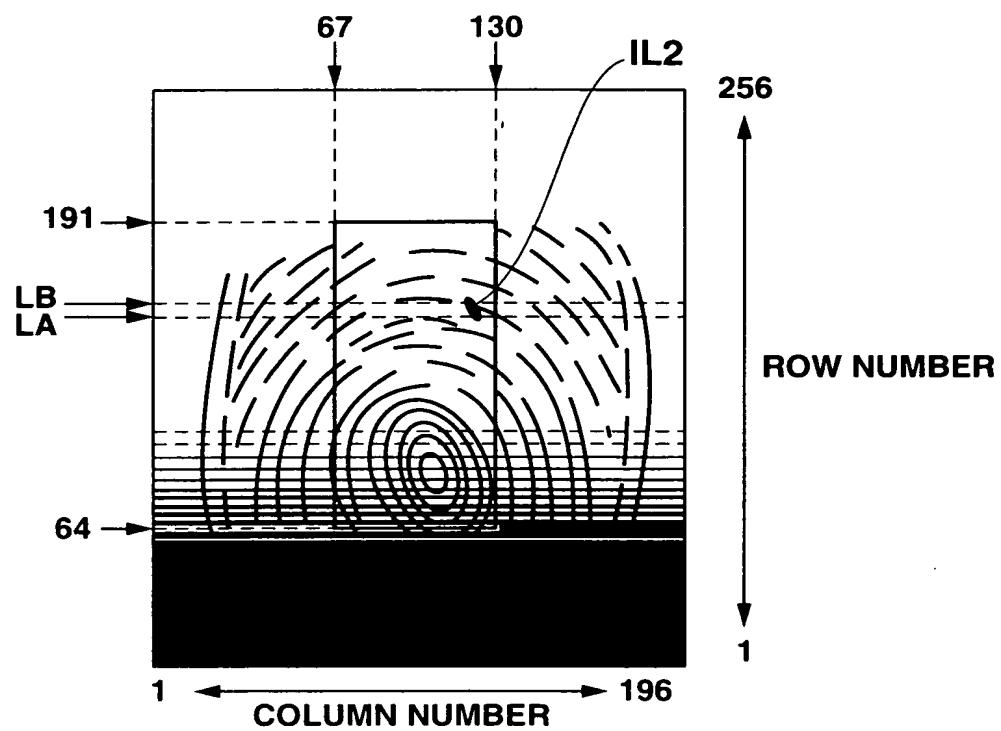


FIG.26

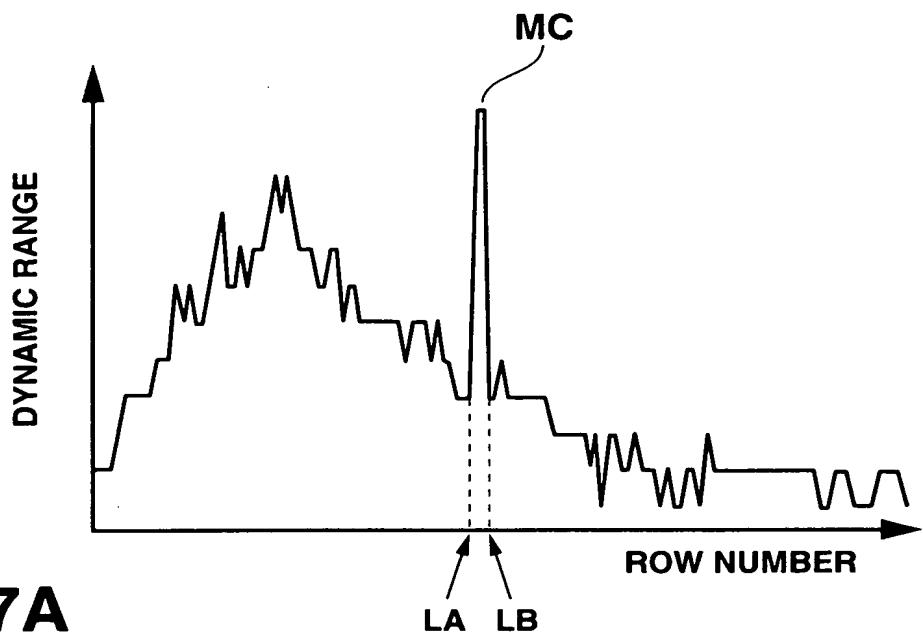


FIG.27A

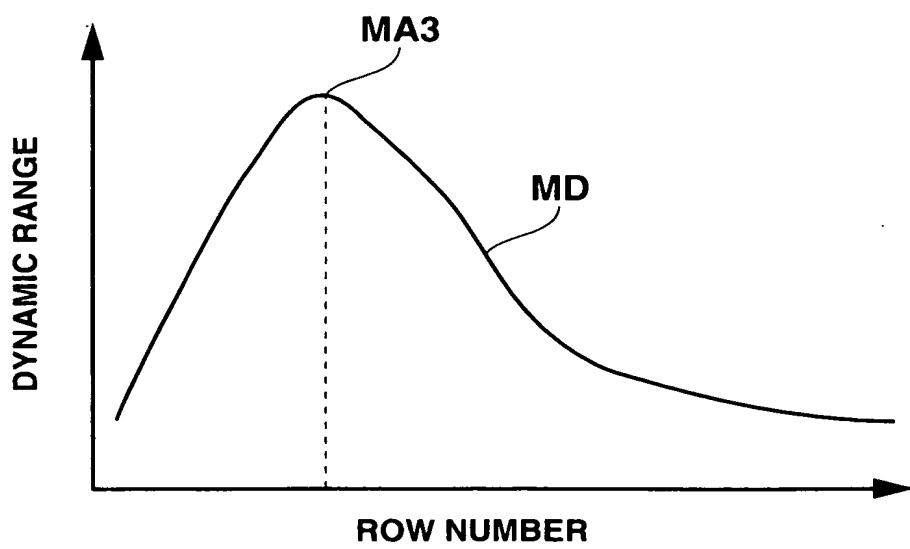


FIG.27B

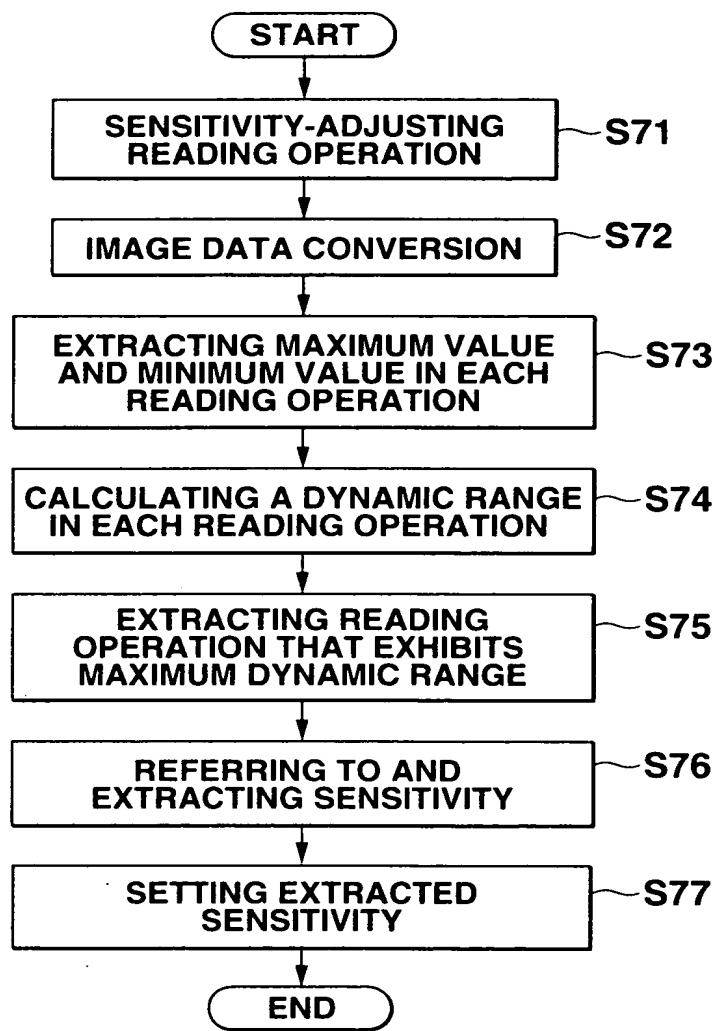


FIG.28

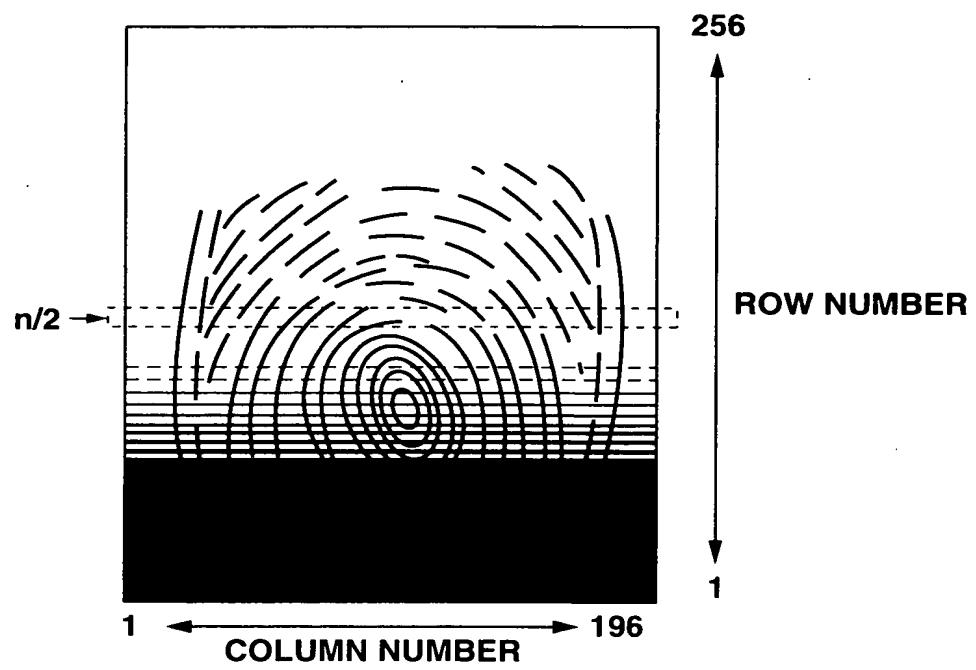


FIG.29

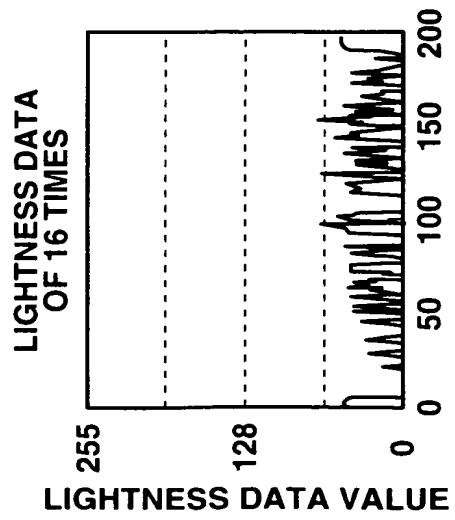


FIG.30A

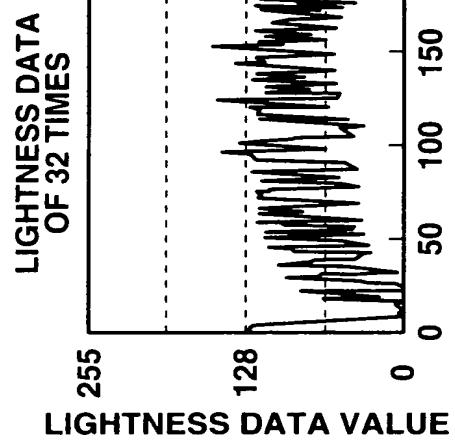


FIG.30B

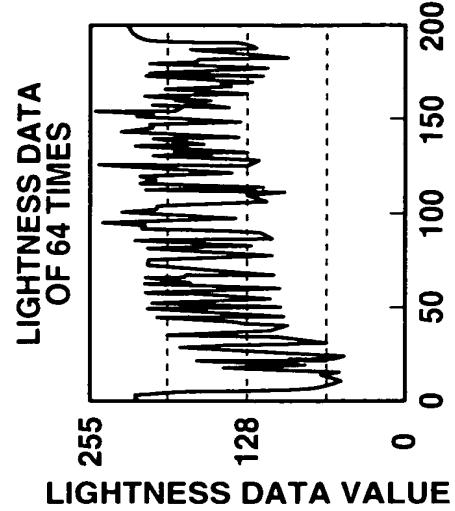


FIG.30C

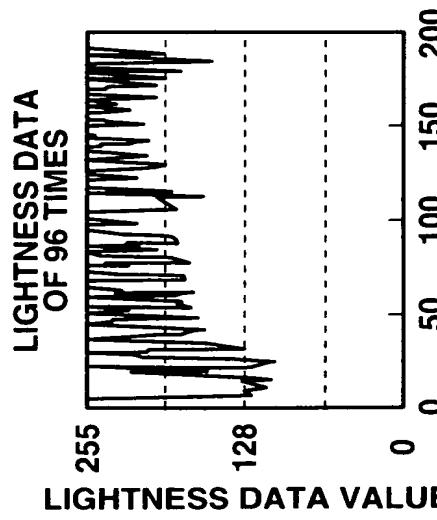


FIG.30D

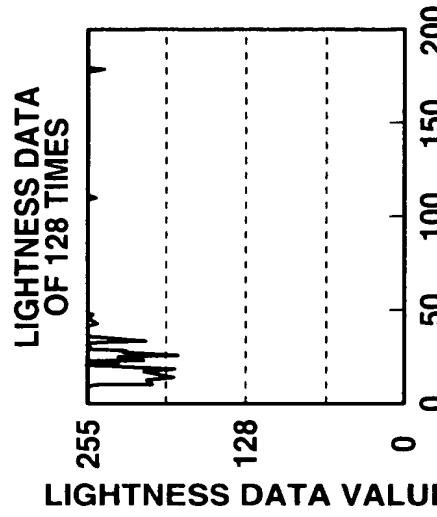


FIG.30E

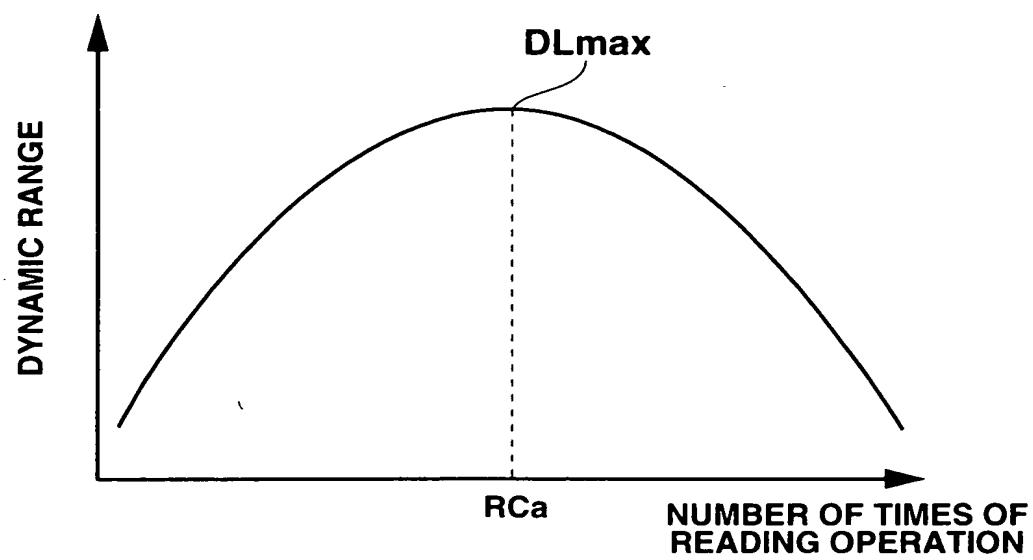


FIG.31

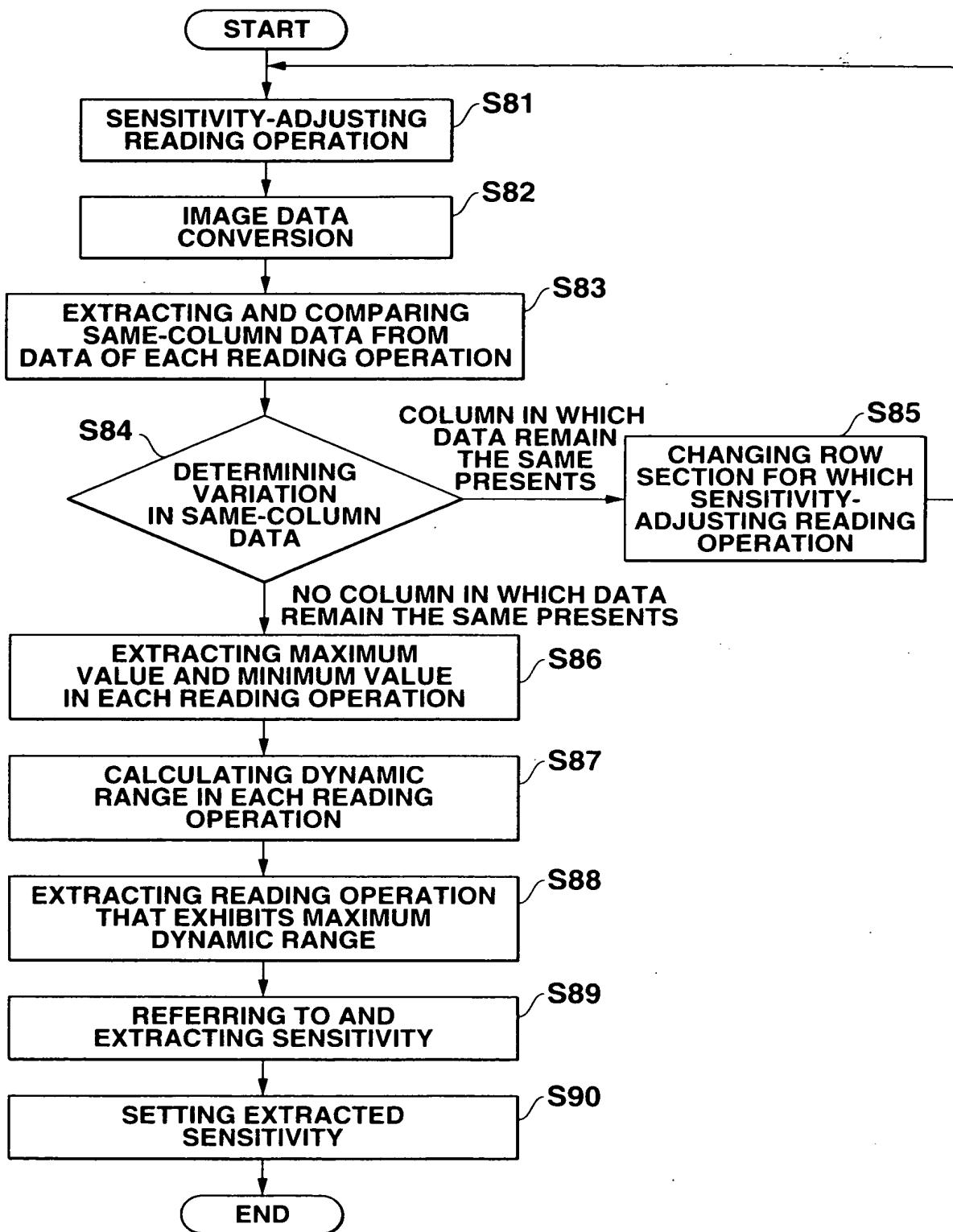


FIG.32

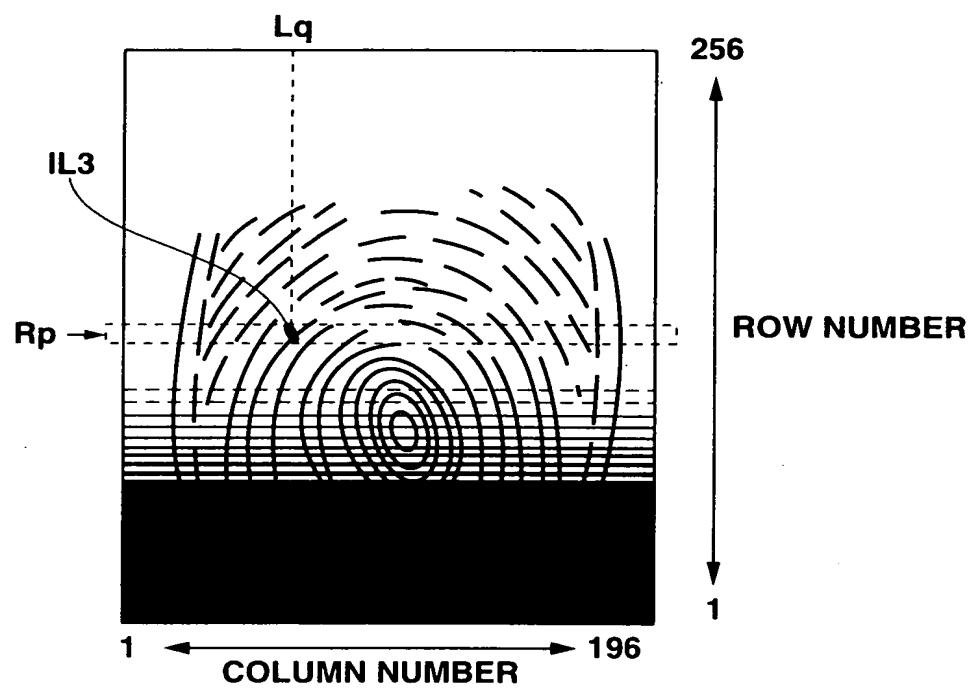


FIG.33

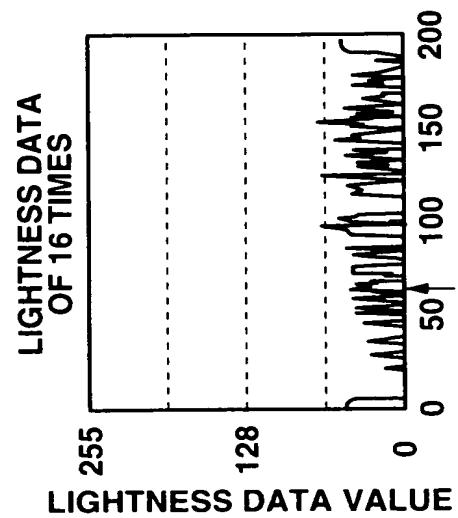


FIG.34A

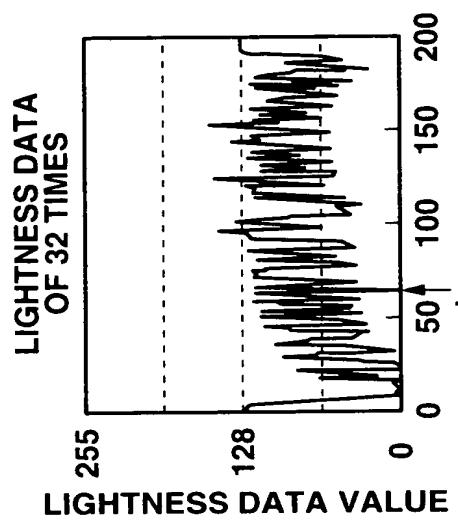


FIG.34B

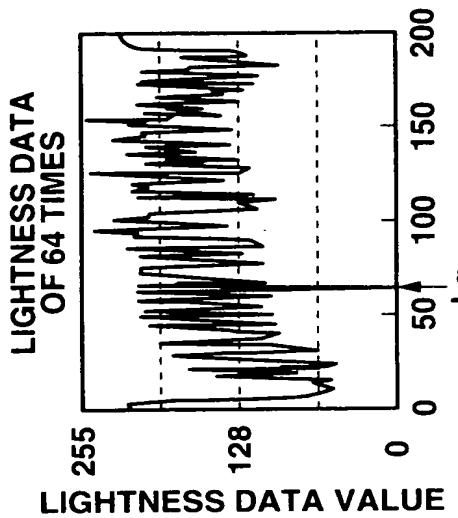


FIG.34C

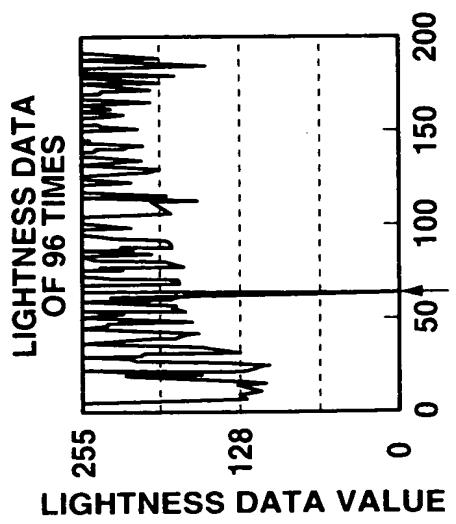


FIG.34D

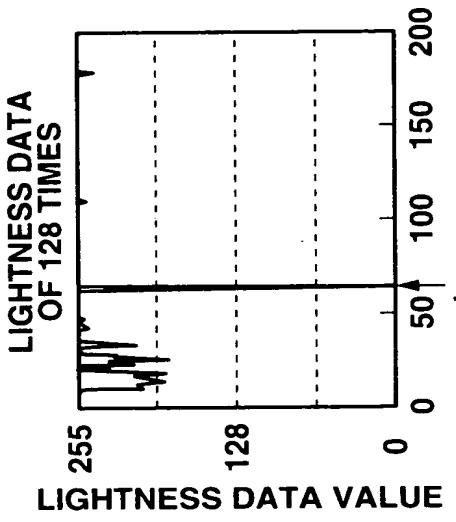
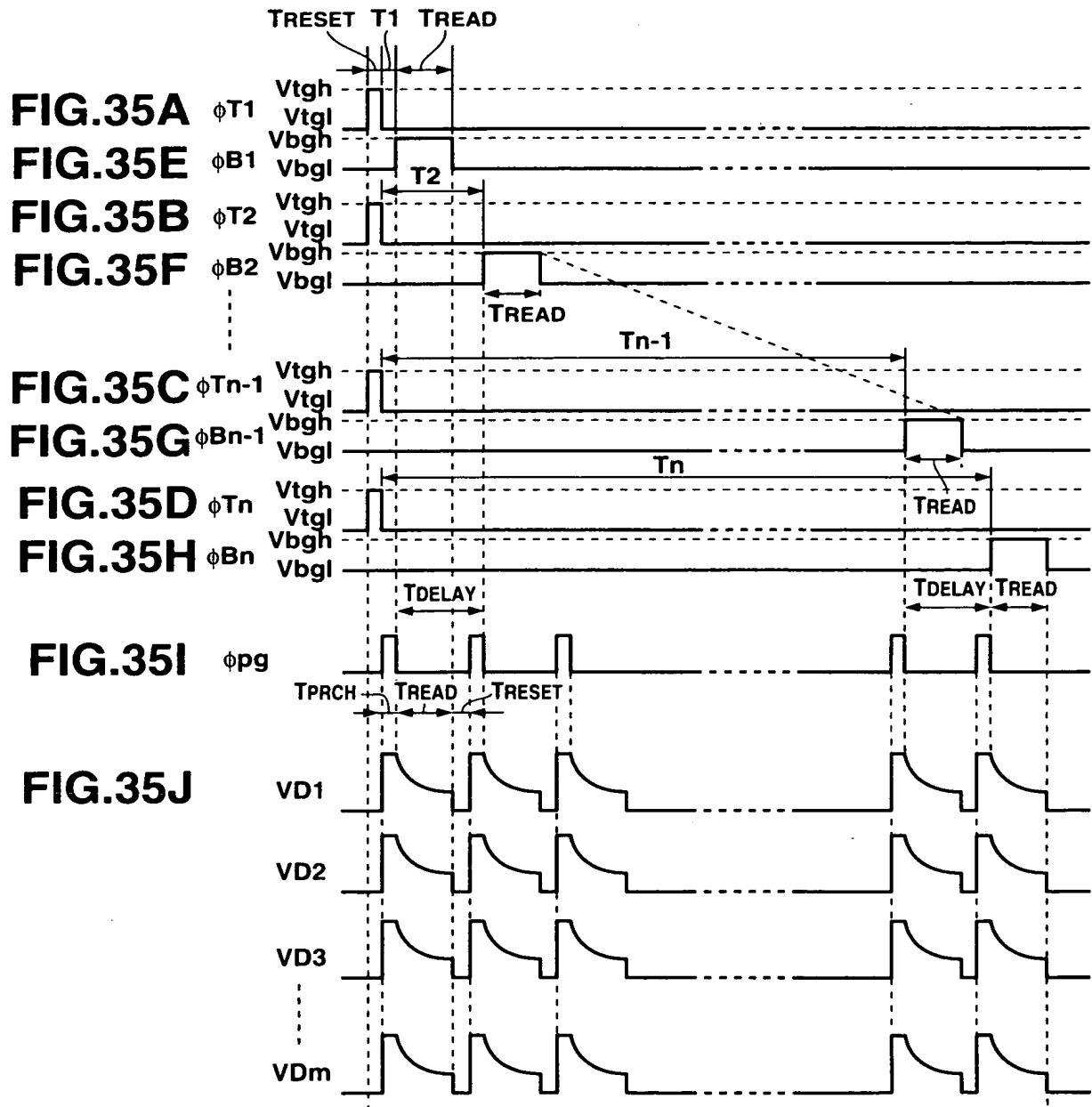


FIG.34E



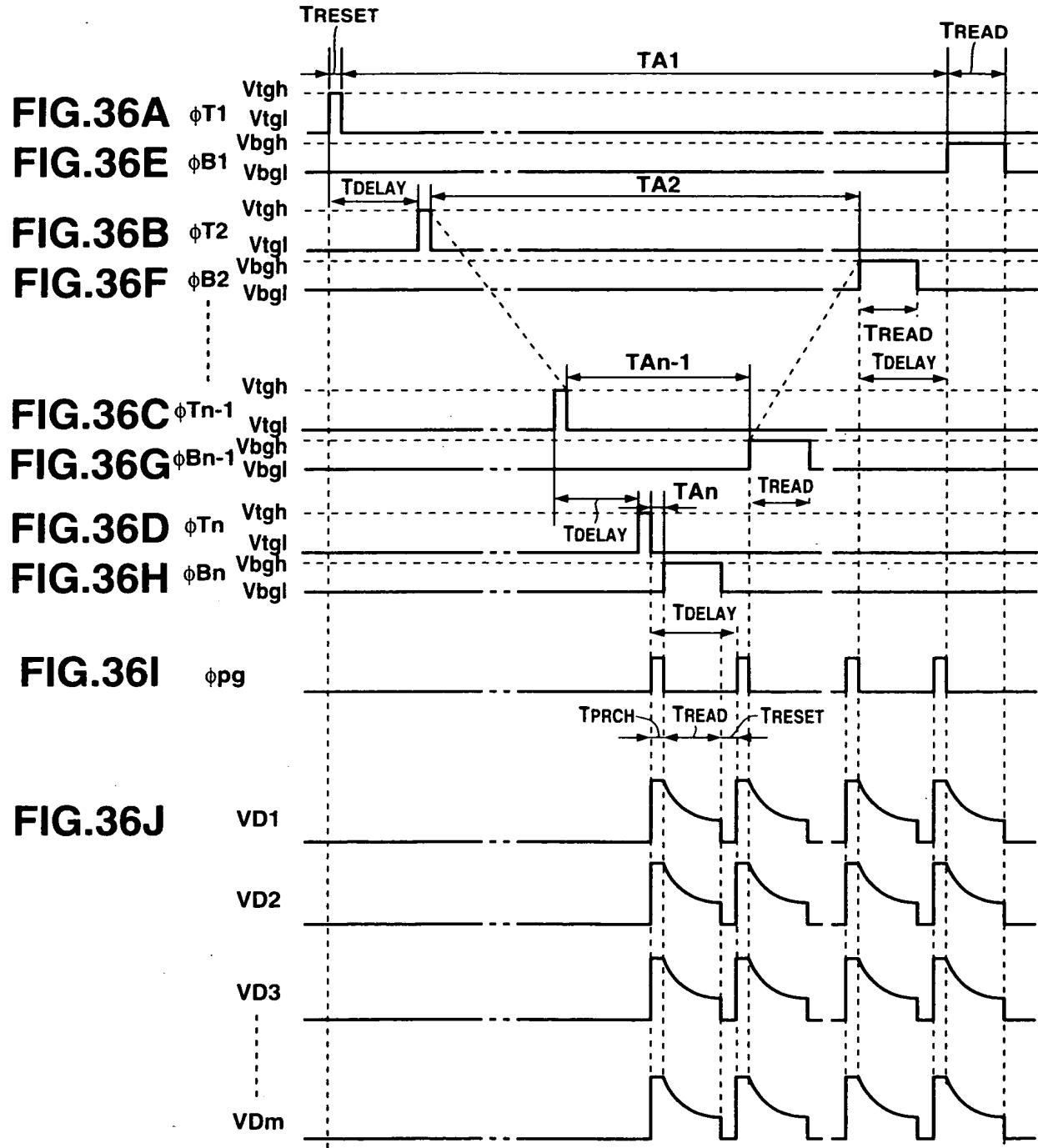


FIG.37A
FIG.37F

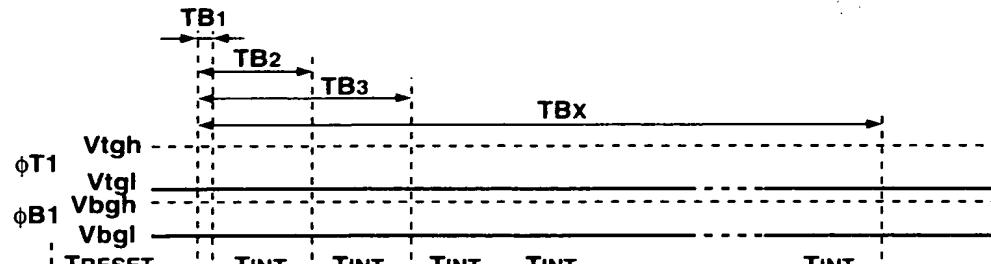


FIG.37B
FIG.37G

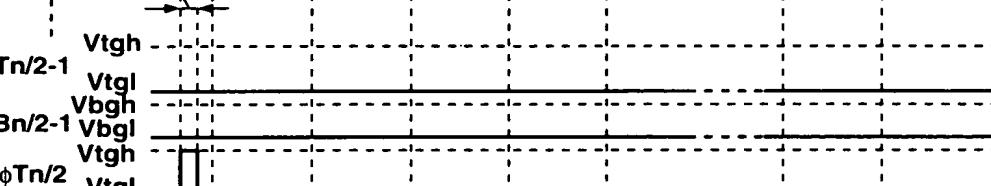


FIG.37C
FIG.37H

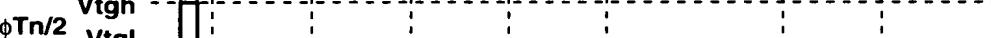


FIG.37D
FIG.37I

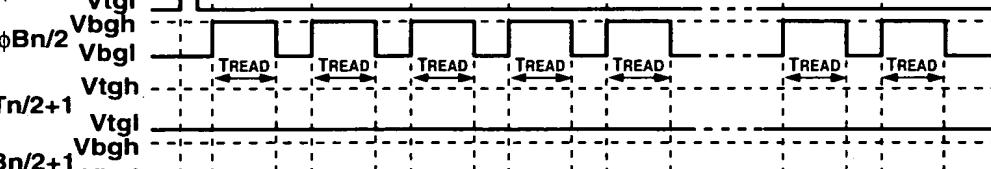


FIG.37E
FIG.37J

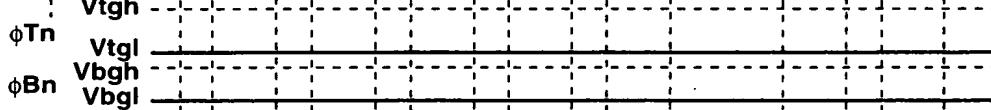


FIG.37K

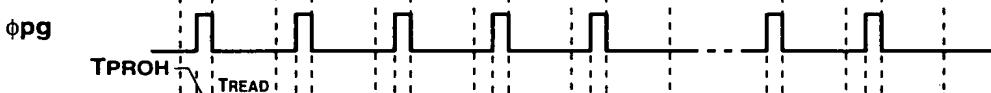
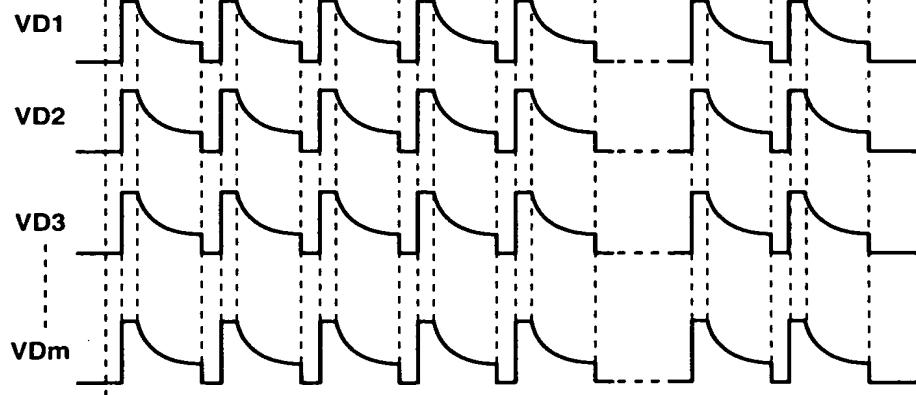


FIG.37L



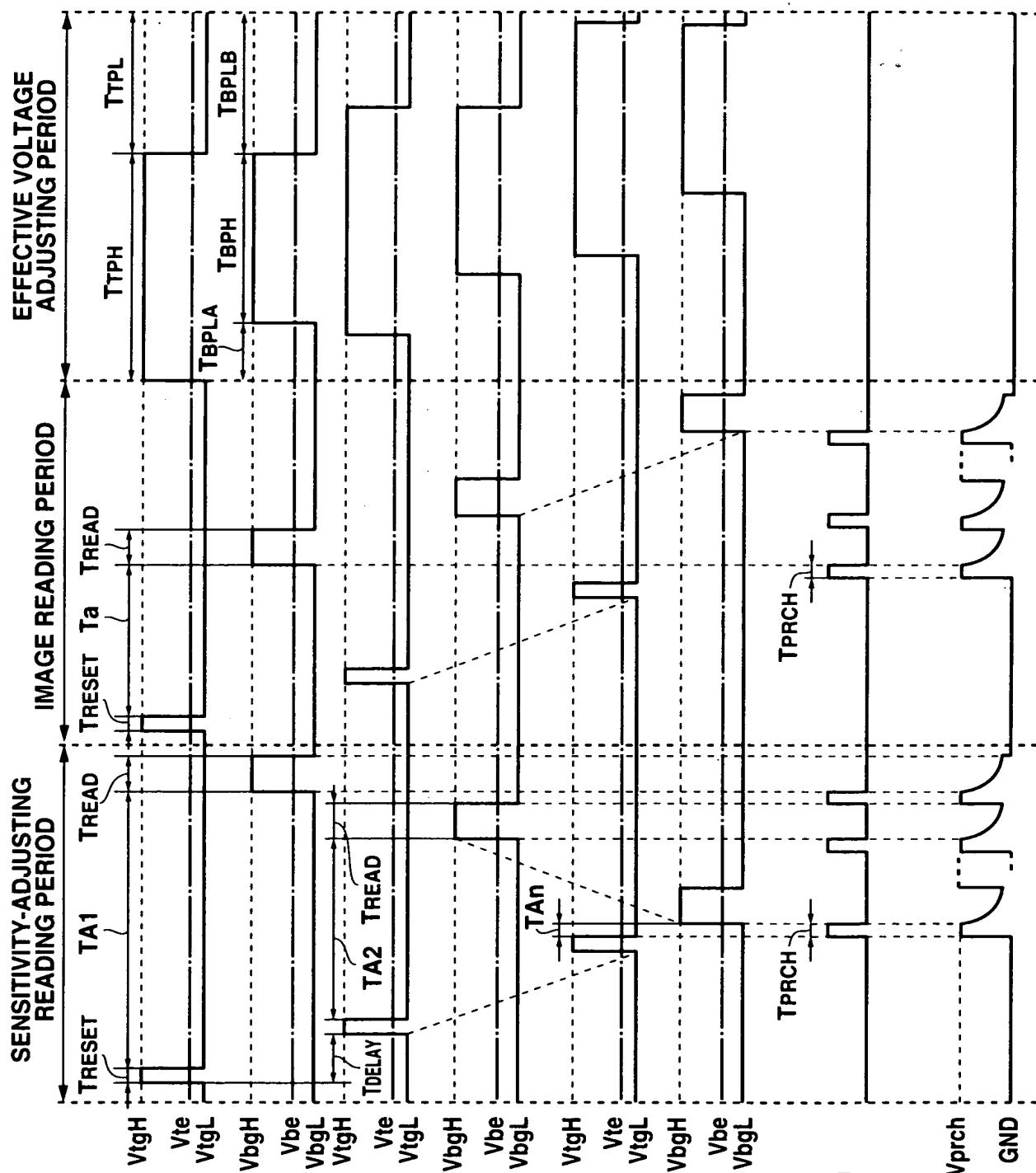


FIG.38A ϕ_{T1}

FIG.38D ϕ_{B1}

FIG.38B ϕ_{T2}

FIG.38E ϕ_{B2}

FIG.38C ϕ_{Tn}

FIG.38F ϕ_{Bn}

FIG.38G ϕ_{pg}

FIG.38H V_D GND

PRIOR ART

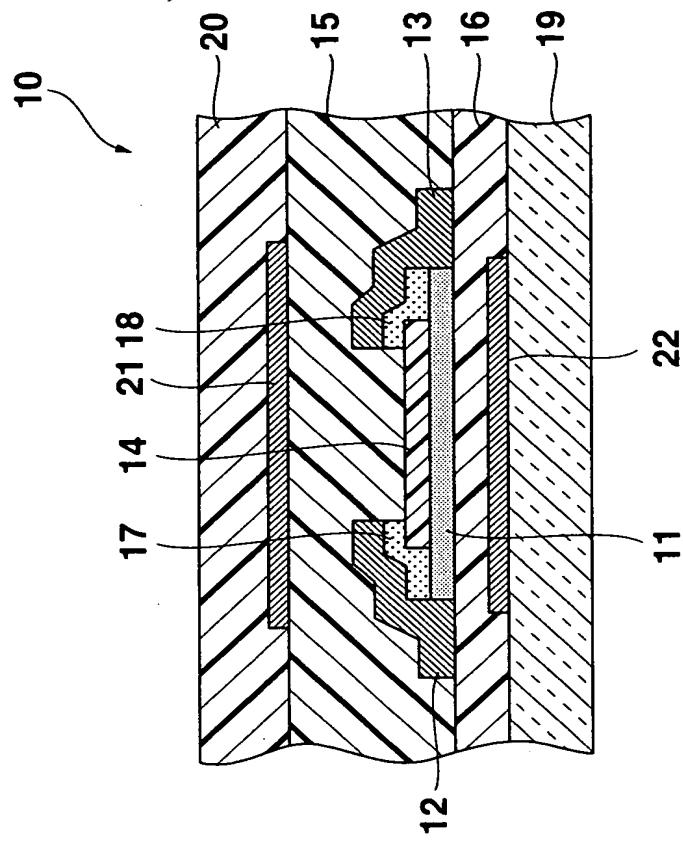


FIG.39A

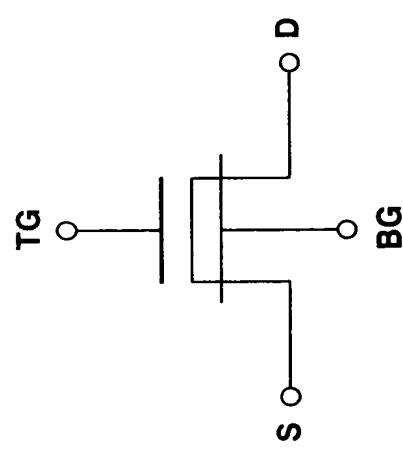
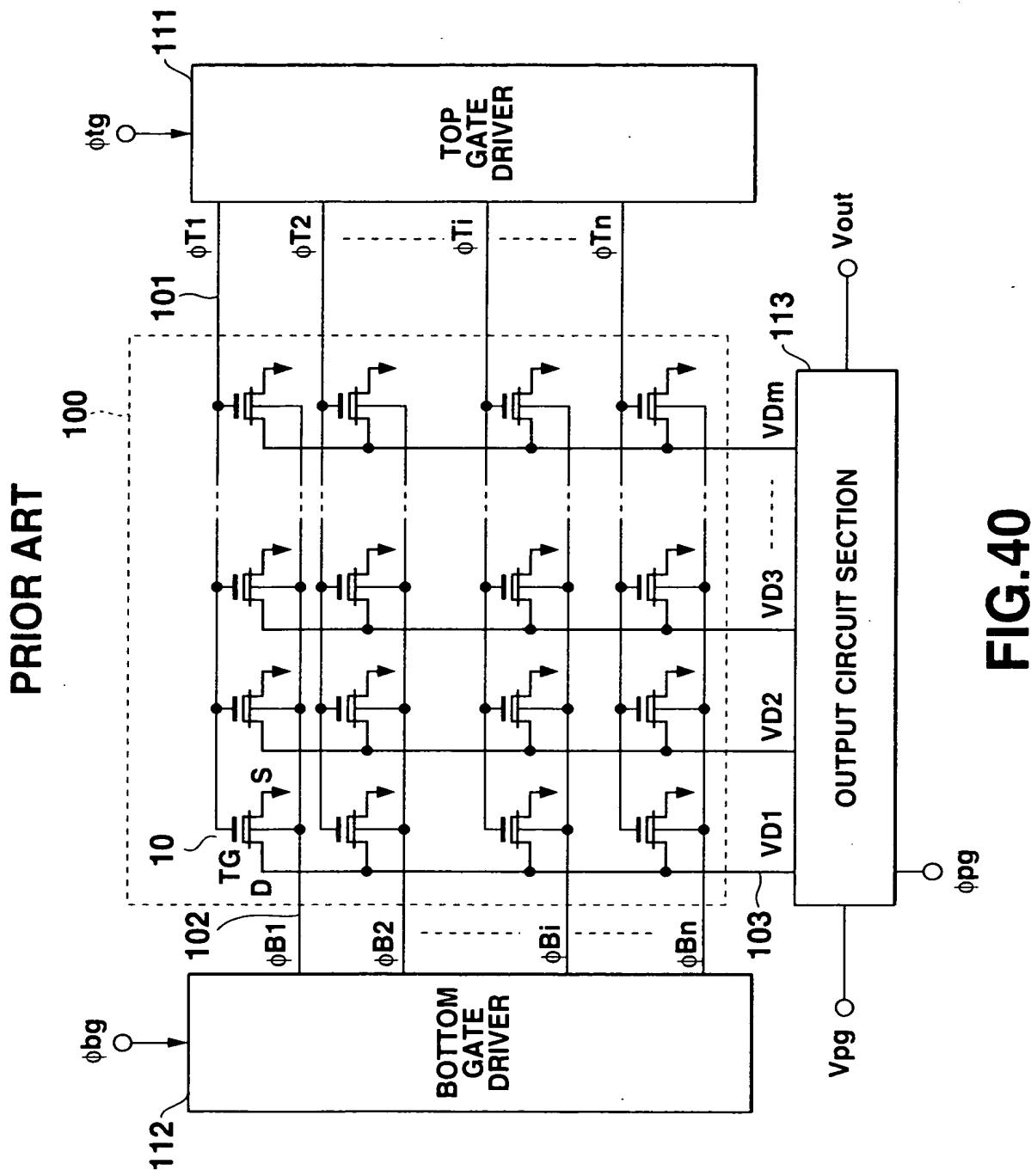


FIG.39B



PRIOR ART

